USING DIBLES NEXT READING FLUENCY OR TEXT READING
AND COMPREHENSION ASSESSMENTS TO IDENTIFY
GIFTED STUDENTS

A DISSERTATION
SUBMITTED TO THE GRADUATE SCHOOL
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BY
MARK BENJAMIN HEIDEN
DISSERTATION ADVISOR: DR. JOSEPH MCKINNEY

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Dedication

This dissertation is dedicated to the two most important people in my life: my wonderful wife Mary Ellen and our son Noah. Mary Ellen had already completed her dissertation journey when we met, but one of the first aspects of Mary Ellen that impressed me was that she had completed a Ph.D. Our son Noah came not long after I began my work towards this doctorate degree and I feel like he was a driving force in my completion of this dissertation and doctorate degree. I dedicate this dissertation to them because without them my life would feel empty.
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# Table of Contents

List of Tables ........................................................................................................................................ vii

Chapter 1: Introduction to the Study ................................................................................................. 1

Statement of the Problem ..................................................................................................................... 1

Purpose Of The Study ........................................................................................................................... 4

Significance of the Study ....................................................................................................................... 5

Research Questions ............................................................................................................................... 5

Delimitations ......................................................................................................................................... 5

Definitions .............................................................................................................................................. 5

Summary ............................................................................................................................................... 6

Chapter 2: Review of the Literature ................................................................................................. 7

Giftedness in School .............................................................................................................................. 7

Identification of the Gifted in School .................................................................................................... 11

Cognitive or Ability Measures ............................................................................................................. 12

Achievement Measures ....................................................................................................................... 16

Alternative Measures ......................................................................................................................... 17

Teacher Ratings ................................................................................................................................. 18

Dynamic Indicators of Basic Early Literacy Skills (DIBELS) ............................................................ 19

Text Reading and Comprehension (TRC) ......................................................................................... 23

Chapter 3: Methodology ................................................................................................................... 26

Research Design ................................................................................................................................. 26

Description of the Sample .................................................................................................................. 28
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validity</td>
<td>31</td>
</tr>
<tr>
<td>Data Collection</td>
<td>33</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>34</td>
</tr>
<tr>
<td>Limitations</td>
<td>34</td>
</tr>
<tr>
<td>Summary</td>
<td>34</td>
</tr>
<tr>
<td>Chapter 4: Results</td>
<td>35</td>
</tr>
<tr>
<td>Data Set</td>
<td>36</td>
</tr>
<tr>
<td>Findings Related to the Research Questions</td>
<td>37</td>
</tr>
<tr>
<td>Chapter 5: Summary of the Study</td>
<td>46</td>
</tr>
<tr>
<td>Discussion of the Findings</td>
<td>47</td>
</tr>
<tr>
<td>Research Question 1</td>
<td>48</td>
</tr>
<tr>
<td>Research Question 2</td>
<td>50</td>
</tr>
<tr>
<td>Research Question 3</td>
<td>51</td>
</tr>
<tr>
<td>Conclusions</td>
<td>52</td>
</tr>
<tr>
<td>Implications for Practice</td>
<td>53</td>
</tr>
<tr>
<td>Recommendations for Further Research</td>
<td>56</td>
</tr>
<tr>
<td>APPENDIX A: Franklin Community Schools Letter of Support for Research</td>
<td>58</td>
</tr>
<tr>
<td>APPENDIX B: IRB Application</td>
<td>59</td>
</tr>
<tr>
<td>APPENDIX C: IRB Exempt Approval Letter</td>
<td>70</td>
</tr>
<tr>
<td>APPENDIX D: Communication from K. Bravo Aguayo</td>
<td>72</td>
</tr>
<tr>
<td>APPENDIX E: Communication from R. H. Good III</td>
<td>73</td>
</tr>
<tr>
<td>References</td>
<td>76</td>
</tr>
</tbody>
</table>
List of Tables

Table 1. Forward Stepwise (Likelihood Ratio) Logistical Regression Analysis of CogAT, NWEA Reading and Math, and DIBELS to Placement in a Gifted Reading Program .... 38

Table 2. Logistical Regression Analysis of all Variables in Dataset to Placement in a Gifted Reading Program .......................................................... 40

Table 3. Comparison of TRC Level to Mean CogAT Verbal Subtest Scores .................... 42
Abstract

**DISSEPTION**: Using DIBELS Next Reading Fluency Or Text Reading and Comprehension Assessments to Identify Gifted Students

**STUDENT**: Mark B. Heiden

**DEGREE**: Doctor of Education

**COLLEGE**: Teachers College

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The purpose of this research study is to determine if the DIBELS assessments and the TRC assessments can accurately identify students into a gifted language arts program.

The results of this study demonstrate that DIBELS and TRC neither could accurately place students into a gifted program that uses a sound, researched identification process. One DIBELS subtest, Letter Naming Fluency (LNF) did show some promise, but even that subtest would not be effective enough to use for this purpose.
Chapter 1: Introduction to the Study

It is a common misconception that gifted students, also known as high ability students in Indiana, do not require different school services and curriculum to reach their potential (Moon, 2009). In contrast, there is research to support the idea that these gifted students need quality gifted programming to fully reach their high potential (Gentry & Keilty, 2004; Hertberg-Davis, 2009; Moon, 2009; Morgan, 2007; National Association for Gifted Children, 2010; Peterson, 2009; Reis & Renzulli, 2010; Reis & Ruban, 2005; Rogers, 2007; Subotnik, Olszewski-Kubilius, & Worrell, 2011; VanTassel-Baska, 2005; S. Wood, 2010; Xiang, Dahlin, Cronin, Theaker, & Durant, 2011). The unique challenges that gifted students bring to a school and likewise experience through their educational walk is one area targeted by researchers as they strive to better understand the unique needs of these students. But, before school leaders can design programs and services for gifted learners, it is necessary to find these gifted learners in schools.

Statement of the Problem

The difficulty of accurately identifying gifted learners, making sure to not over-identify students from wealthy families or who are “teacher-pleasers” and making sure to still find gifted students from underserved populations such as poverty, minority, or twice-exceptional groups, has been a subject of much research as well (Fletcher & Speirs Neumeister, 2012; Ford, 1998; Gentry & Keilty, 2004; Gibbons, Pelchar, & Cochran, 2012; Mendaglio, 2003; Naglieri & Ford, 2003; Peterson, 2009; Pierce et al., 2007; Shaunessy, Karnes, & Cobb, 2004; Speirs Neumeister, Adams, Pierce, Cassady, & Dixon, 2007; VanTassel-Baska, Feng, Swanson, Quek, & Chandler, 2009). Schools often have to balance a robust identification system with the cost and difficulty of implementing such a system. Another challenge is that often the administrator or school leader charged with identifying gifted students does not have any training or background in the
identification of gifted students. With these two common issues taking place in most districts, administrators need to accomplish a complicated and sometimes controversial identification process with limited funds and unfortunately often limited training.

One popular and emerging trend is to use easily available Dynamic Indicators of Basic Early Literacy Skills (DIBELS) reading assessment data to identify young students for gifted programming. Although many schools use DIBELS through state grants or other funding, and although school leaders are under pressure to not over-test students, the urge to use this ready and available reading achievement measure is strong because this assessment is already administered and the results are easy to read and even color-coded. In fact, DIBELS is widely used and available all over the United States and Canada with 8,293 schools administering the test in 2004-2005 for more than 1.7 million K-3 students (Hoffman, Jenkins, & Dunlap, 2009). Many schools also purchase DIBELS through Wireless Generation, now a part of Amplify, a company that sells a version of DIBELS that can be used through devices like iPads or iPhones. When schools purchase DIBELS through Amplify, an additional assessment comes with DIBELS and is required to be used. That assessment is a reading comprehension assessment called Text Reading and Comprehension or TRC. Because these two assessments are often used together, often schools will utilize both when making decisions about a student’s reading ability. Reading comprehension is a higher-level skill than letter sounds or other components of DIBELS, so schools will often try to use a measure of reading comprehension to measure reading ability. Reviewing the 2012-2013 data provided by the Indiana Department of Education, 46 of 292 school districts in Indiana reported using DIBELS and/or TRC assessments as a part of their gifted identification program (Marschand, 2014a, 2014b). This is even after the IDOE has provided schools with guidance urging DIBELS not to be used in gifted reading
identification. School districts in Indiana self-report on their identification methods and since this is not confirmed by any agency, it is actually likely that 46 districts is the minimum number of school districts using DIBELS and TRC for gifted identification. A more recent survey of Indiana school district high ability coordinators conducted at the fall high ability coordinator meetings in September 2014 indicated that 39 out of 118 respondents reported using DIBELS as a part of their district’s identification process (Heiden, 2014). This is one third of the districts who responded to the survey reporting they use DIBELS in the high ability identification process at their school. The same survey also indicated that 33 out of 118 respondents reported using TRC as a part of their identification process (Heiden, 2014). Since only 118 school districts of the 292 school districts were represented, it could be assumed that even more school districts are using either DIBELS or TRC as a component of their gifted identification process. If the response from this sample of coordinators is proportional to what the response from the actual number of districts in Indiana would be, then there would be 96 districts that use DIBELS as a part of their identification process. It is important to also note here that the high ability coordinators who attend the annual fall meeting are often the most educated because they are a part of these several hour meetings that focus on best practices in high ability identification and programming. The high ability coordinators who do not attend are likely to have even less knowledge than the ones who do attend these meetings. This survey also asked why they use or do not use DIBELS or TRC as a part of their identification process and the response often from those who do use these tests as a part of identification was often that since they already had the assessment, that they decided to just use it (Heiden, 2014). High ability coordinators in Indiana often have this position assigned as an extra duty or job, in addition to their official job title as a teacher, principal or central office administrator. Because of this many high ability coordinators
in the state do not have the knowledge or perhaps even the time to properly fill the role as a high ability coordinator. The technical manual for DIBELS is clear that gifted program identification is not a proper use of the test, but obviously further research is needed to see if this testing can be used in this way since it was not designed by the authors for this purpose (Good, Kaminski, Dewey et al., 2011). One of the authors, Dr. Roland Good III and a researcher on the DIBELS staff, Katherine Bravo Aguayo, were contacted via email and both confirmed that DIBELS was not developed for, and also not ever researched and proven or disproven to be able to identify students into gifted programs (K. Bravo Aguayo, personal communication, September 22, 2014 [Appendix D]; R. Good III, personal communication, September 22, 2014 [Appendix E]).

Often accompanying this purchase of DIBELS through Wireless Generation or Amplify is also a reading comprehension measurement called Text Reading and Comprehension (TRC). Because schools may also try to use TRC as a measure of giftedness, it is important to also look closely at this measurement tool as well. The review of the available literature examined if the DIBELS and TRC assessments have been researched and validation established to be used for the identification of gifted students. A review also of the best practices in the often complex and confusing world of identifying gifted students was undertaken. A good starting point for my research was just what is gifted and how is it defined.

**Purpose Of The Study**

The purpose of my study was to provide education leaders the research to be able to determine if the DIBELS and TRC assessments can be used as part of a process to identify students into gifted programs.
Significance of the Study

Although I completed a thorough review of the literature, I was unable to find any article that appropriately investigated the ability of the DIBELS or TRC assessments to accurately and effectively identify students into gifted reading programs. There was evidence that schools are already using DIBELS and TRC data to make these determinations, but with the DIBELS technical manual expressly prohibiting such a usage, it was necessary to find out if the DIBELS and TRC assessments could be used for this purpose.

Research Questions

My research questions are as follows:

1. Do the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments identify giftedness in language arts in children in Kindergarten?

2. How well does Text Reading and Comprehension (TRC) identify giftedness in language arts?

3. How well does the combination of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading and Comprehension (TRC) identify giftedness in language arts?

Delimitations

I chose to use locally available, archived data from one school district, instead of attempting to gain a larger sample of data from across the state or nation. Also, this study will examine kindergarten students and sometimes identifying young students can be a challenge.

Definitions

The primary assessments described and referenced throughout this study are listed along with the primary usage guidelines for each assessment instrument.
Cognitive Ability Test (CogAT) is an assessment that is designed to measure the verbal, quantitative, and nonverbal abilities of students. This assessment is considered an ability or intelligence assessment (“Cognitive Abilities Test Form 7 Research and Development Guide,” 2012).

Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are assessments that are designed to be quick and provide information on the development of early literacy skills in students in grades kindergarten through sixth grade. The subtests for DIBELS are First Sound Fluency (FSF), Letter Naming Fluency (LNF), Phoneme Segmentation Fluency (PSF), Nonsense Word Fluency (NWF), DIBELS Oral Reading Fluency (DORF), and Daze. Each subtest measures a different aspect of early literacy (Good III, Kaminski, Cummings, et al., 2011).

Northwest Evaluation Association Measures of Academic Progress (NWEA MAP) are computer-adaptive assessments in reading, mathematics, and language that measure achievement in these content areas (“Technical Manual for Measures of Academic Progress (MAP) and Measures of Academic Progress for Primary Grades (MPG),” 2011).

Text Reading and Comprehension (TRC) is an assessment that helps determine a child’s instructional reading level. It is administered individually through the reading of a short text and then answering questions or tasks (“Text Reading and Comprehension,” n.d.).

Summary

In conclusion, because of the need to identify and serve gifted students, and the difficulty and challenges that come with that process, school districts are sometimes resorting to using a test like DIBELS or TRC to identify students for gifted services. These two instruments have not been researched for this use, so it is necessary to discover if DIBELS and or TRC can be effectively used for this purpose.
Chapter 2: Review of the Literature

In this literature review, I examined the current research to prepare to answer my research purpose: Using DIBELS Next/TRC Assessments to Identify Gifted Students: Best Practice or a Mistake? I organized my review into three sections that allows a thorough reading of the literature. The sections are Giftedness in School, Identification of the Gifted in School, DIBELS, and TRC. I examined the available literature for research or data on using the DIBELS and TRC assessments to identify gifted students.

In order to find all of the relevant literature that could bring a fuller understanding to answer my research question, I used online search engines such as Academic Search Premier, Web of Science, and Google. I also relied heavily upon experts in the field as well to help to point me toward resources as well. The journal Gifted Child Quarterly, published by the National Association for the Gifted, was also a major source for literature, and I found myself looking through many editions for more resources. The reference section at the end of the literature directed the way to more excellent and varied resources on gifted education. The literature in this review included both quantitative and qualitative research, as well as reviews of previous research, and compilations of research used to then draw conclusions.

Giftedness in School

One of the most difficult parts of knowing who in school is gifted is agreeing upon an operational definition of what entails “giftedness.” There are an alarming number of definitions of giftedness, and that number seems to keep increasing (Subotnik et al., 2011). Although there are many definitions of giftedness, the focus was on two definitions for this section of giftedness in school (Assouline & Lupkowski-Shoplik, 2012; Borland, 2009; Callahan, 2009; Lohman,
2005a, 2005b; Naglieri & Ford, 2003; Shaunessy et al., 2004; Treffinger, 2009). The National Association for Gifted Children (NAGC) in its March 2010 position paper had the following definition of giftedness:

Gifted individuals are those who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in top 10% or rarer) in one or more domains. Domains include any structured area of activity with its own symbol system (e.g., mathematics, music, language) and/or set of sensorimotor skills (e.g., painting, dance, sports). (p. 1)

Indiana’s definition mirrors the NAGC’s definition as follows:

The Indiana Code defines a student with high abilities as one who:

- performs at or shows the potential for performing at an outstanding level of accomplishment in at least one domain when compared with other students of the same age, experience, or environment; and
- is characterized by exceptional gifts, talents, motivation, or interests. (IDOE, 2013, para. 3)

It is clear from these two definitions that gifted children are those who show outstanding performance in school, or who have the potential to show outstanding performance in school.

Looking further into what outstanding is, the NAGC definition stated that the highest 10% or less in achievement seems to be the magic number. Using a percentage of students who are gifted, and then logically a percentage of students who are not gifted, is problematic when it is decided that 3-5% of students are gifted by setting a hard cut-off line on testing like ability or achievement testing (Borland, 2009). Borland (2009) went on to state that “giftedness is not a fact of nature, but instead a social construction” (p. 237); so to have a certain percentage as
gifted is not good practice. The identification of the gifted is discussed in depth later in this literature review, but it is important to note that the process of finding students that fit the definition of giftedness is a process that should be undertaken only after thorough research and consultation with experts in the field.

In examining the definitions closer, it is notable that giftedness is not only in academic areas, but also can be in other areas as well. Music, painting, dance, and sports are specifically mentioned in the NAGC definition, and others are implied by both definitions (IDOE, 2013; NAGC, 2010). Students can be gifted in nearly any pursuit, but schools typically focus only on the academic areas of reading and math. Leadership and creativity are also areas that have great potential to both recognize greatness in students and to also cultivate these skills to even higher levels (Milligan, 2004; Treffinger, 2009). Remembering that giftedness can be shown in many different ways, it is important that schools identify and serve students in as many areas of giftedness as possible. One limiter to this is that schools tend to spend much more money in the identification of gifted students, than in the service and teaching of gifted students (Callahan, 2009). With this knowledge that definitions vary wildly from organization to organization and from state to state (if the state even has a definition), it is very important that a school district has a definition of giftedness from which to work from when starting the identification process.

A consideration a district must address is in what domains or areas can it provide services to gifted students. If a school district has a capability to provide services to students identified as gifted students in reading, math, creativity, and leadership, then that district should create a definition that only addresses those four domains and also create an identification process that only identifies students in those four domains. It is important for a school district to understand they cannot provide services in every possible domain of giftedness so they would need to start
with which domains are being served and then work backward to create a definition and then identify the students to be served in those areas.

What is it like to be gifted in school? What are gifted children like in comparison to their general education classmates? Gifted children are a diverse, heterogeneous group of students, breaking through the myth that they are neurotic, strange, or less well adjusted (Reis & Renzulli, 2009). In fact, gifted children as a group are popular with classmates, are leaders who are well-adjusted emotionally, and are independent (Wellisch & Brown, 2012). There is no evidence that gifted students are any more likely to have adjustment issues or psychological issues than their non-gifted peers (Wellisch & Brown, 2012). Gifted children vary even in their ability and achievement, with underachievement being a major issue that gifted children and adults face (Reis & Renzulli, 2009). Peterson (2009) described how gifted students are not likely to face any additional social and emotional issues than regular education students, but when they do they face different problems and they often approach them differently than their peers. She explained that since gifted students are so different than other students, schools are not always accommodating to the gifted students varied needs and that exacerbating this issue is that school counselors usually do not receive training in working with gifted students (Peterson, 2009). It is common for parents or primary caregivers to have to convince school administrators of an issue or that their gifted children need additional services, especially if the gifted children are twice exceptional and struggle in some other aspect of their lives (Neumeister, Yssel, & Burney, 2013).

Gifted children do face challenges to their continued education. There is a myth that gifted children will do just fine on their own: this myth is particularly hurtful to gifted children because money and effort is directed away from their needs (Callahan, 2009; Subotnik et al., 2011). With laws such as No Child Left Behind making sure that resources are directed toward
the students who struggle, education leaders and lawmakers are not focused on the highest achieving students (Subotnik et al., 2011). Although leaders focus on the students who are below proficient, other countries are able to churn out many more advanced mathematicians and scientists than the United States (Subotnik et al., 2011). It is vital that gifted students have specialized services provided that should include accelerated and enriched curriculum, time with other gifted students, and certainly teachers who have had training in the teaching of gifted students (Reis & Ruban, 2005; VanTassel-Baska, 2005).

**Identification of the Gifted in School**

Perhaps the most difficult part of beginning to provide services for gifted children, is to first decide who is gifted. Obviously, children come in an unlimited amount of personality types, cognitive ability levels, achievement levels, and social economic backgrounds. In order to create a program that can meet gifted children’s varied needs, it is necessary to first decide who these gifted children are, and who they are not. As districts look to practical ways to implement the identification process, it is important to start with a definition of giftedness and then move into identification. Indiana requires that school districts identify and serve students in grades K-12, so this places a legal requirement on completing this process (“Indiana code for high ability students,” 2005). IQ or intelligence tests can be controversial because they are standardized tests and the results are abstract, and some schools have stopped using them altogether because of parent and teacher response (Wellisch & Brown, 2012, p. 152). It would seem then that teachers would be the best place to start to identify students as gifted. However, as Ford (1998) noted, teacher referrals or nominations alone do not work for placement into gifted programs because teachers tend to refer students who exhibit “teacher-pleasing” (p. 9) actions, but less frequently refer students who do not exhibit these traits.
In a study looking at teacher perceptions during Project CLUE with the Indianapolis Public Schools, it was documented that teachers tended to think less of their minority students, and more troubling, did not recognize the strengths of the students that they felt did not deserve to be identified as gifted (Speirs Neumeister et al., 2007). Also, Ford (1998) said that unless teachers had extensive training in gifted education and identification, they were less accurate than parents at identification of gifted students. If students were identified as gifted, teachers often felt that many of their students were simply high achievers, not actually gifted (Speirs Neumeister et al., 2007). With these weaknesses in using teachers to identify gifted students, it is necessary to find ways to use other means.

A recent study did not focus on using Dynamic Indicators of Basic Early Literacy Skills (DIBELS) for gifted identification, but this assessment was used as a portion of the study. Interestingly DIBELS did not do an effective job as a screening tool to identify students to be assessed further for placement into a gifted program (Finch, Neumeister, Burney, & Cook, 2014). In fact the researchers cautioned using DIBELS in this way because it may fail to recognize students who might have the potential for outstanding school performance (Finch et al., 2014).

**Cognitive or Ability Measures**

Understanding that teacher recommendations alone cannot ably identify students into gifted programs, where should program directors begin to best identify students? What does the literature say are the best ways to identify gifted students, taking care to also identify students who come from disadvantaged backgrounds such as a family that lives in poverty or that speaks a language other than English at home? This discussion begins with an examination of using cognitive or ability measures in determining placement into gifted services. Cognitive or ability
measures are designed to show intelligence, and though some may believe that ability and actual achievement are not linked, Lohman (2005a, 2005b) and Erwin and Worrell (2012) stated that they are linked. Therefore, it must be understood that achievement testing and cognitive testing complement each other (Erwin & Worrell, 2012; Lohman, 2005a). Still, ability measures are important to use for the identification of gifted students because program administrators wish to find students who have potential but have yet to show it. Also, eliminating the subjective nature of teacher or parent recommendations can be accomplished by relying on standardized tests. Ability or cognitive tests are designed in part to show the potential learning ability of a child and are a very effective at this task (Erwin & Worrell, 2012). However, researchers wonder which type of ability test should be used? There are many types that have been created and are marketed for the purpose of gifted identification, including tests that measure verbal, nonverbal, and quantitative cognitive ability. This is where one controversy rages in gifted education. Cognitive testing experts differ on when and how to use nonverbal reasoning assessments in the identification of gifted students, but especially in gifted minority students who might otherwise be overlooked. All of this controversy is because of the known need to better identify students from ENL or minority backgrounds. Naglieri and Ford (2003) stated that many popular cognitive assessments such as the Wechsler Intelligence Scale for Children–Third Edition (WISC-III), Stanford-Binet Intelligence Scale, Fourth Edition (Stanford-Binet IV), and the Woodcock-Johnson Tests of Cognitive Ability (WJ-R) all score White children higher than Black children, and this can cause fewer Black children to be placed into gifted programs or to receive accelerated academic programming.

With this information, the push was on to find a better means of identifying gifted minority, poverty, or ENL students. Naglieri and Ford (2003) also wrote that nonverbal tests of
intelligence are able to identify more ENL students or students from poverty because the verbal measure that they cannot score as well on is not included in such a test. One of the most popular nonverbal tests of cognitive ability is the Naglieri Nonverbal Ability Test (NNAT). Naglieri and Ford (2003) claimed that White and Black students score the same on this test, and therefore, it is more effective at identifying students from an ethnic background other than White. This opinion is also concurred by Shaunessy et al. (2004) who wrote that nonverbal assessments may allow more students from poverty or minority backgrounds to be considered also for gifted services since other ability assessments may keep them such consideration.

However, this research did not hold up to scrutiny. Lohman (2005a) did not share this same opinion of the effectiveness of the NNAT specifically, but he was also doubtful of some of the findings that Naglieri and Ford espoused in their 2003 article. Lohman went on to discuss how Naglieri and Ford had used a sample that was not reflective of the U.S. student population to make his claim that Black and White students scored the same on the NNAT (Lohman, 2005a). Lohman also claimed that the NNAT was not all that different from the Raven’s Progressive Matrices Test, another nonverbal ability test, but claimed results that are not consistent with the similarities in the tests. Lohman also called into question the idea that just because two groups of students (Whites and Blacks) scored nearly the same on an ability test means that the test is a culture-fair measure of ability. Worrell (2009) even stated that “one should hold suspect scores on any tests that are intended to predict school achievement but do not manifest the same gap that is present in school achievement” (p. 243). In a 2013 study, serious doubts continued to be raised about the NNAT and its ability to serve the function that the authors claimed it could serve (Giessman, Gambrell, & Stebbins, 2013). Giessman et al. went on to state in their recent study that the CogAT noverbal section worked just as well as the
NNAT test itself at using a nonverbal measure of cognitive ability. Callahan (2009) wrote that there was no longitudinal evidence showing that the students who scored well on the nonverbal testing actually showed gifted behaviors.

The controversy over how to better identify students from minority, poverty, or ENL backgrounds is not going away, but it exists because many in the field of gifted education believe that we must do a better job of identifying these students. Callahan (2009) wrote specifically that there was no silver bullet when it came to identifying more minority or ENL students, and that certainly a nonverbal test was not a silver bullet. Giessman et al. concurred and cautioned schools that thought that by purchasing the NNAT they had solved their identification of minorities’ problems. Lohman (2005b) suggested that schools or districts should look into each subgroup of students and rank order the students in those subgroups so that children with similar backgrounds were being compared to each other. Lohman went on to state that instead of using nonverbal ability scores, using a test that measured verbal, quantitative, and nonverbal abilities was more appropriate because minority and ENL students actually scored higher on quantitative sections. Worrell (2009) concurred with this finding, stating that it was important to consider several domains when predicting future performance. Loman stated that achievement in a certain subject area (measured by quality standardized testing) is the best way to determine if a child is ready for advanced content. One example of a well-researched identification procedure making an adaption to align from a Naglieri and Ford model to a Lohman model is Project CLUE in the Indianapolis Public Schools which began to place students into gifted services if there was a high nonverbal score accompanied also by a high performance on an achievement test (in this case the TerraNova achievement tests) (Pierce et al., 2007).
Another school of thought on the identification gap in gifted education between different ethnic groups of students is that there is not a problem with the assessments themselves as they are quite good, but that the identification gap exists because of the achievement gap that plagues the U.S. educational system (Erwin & Worrell, 2012). Erwin and Worrell discussed that it was known that Black and Hispanic students do not do as well in American schools, so educators should not be surprised when they also do not qualify for gifted education as often as White or Asian students (Erwin & Worrell, 2012). Callahan (2009) wrote that it would also be a myth to assume that there should be the same percentage of any race or subgroup in gifted services as in the regular sample.

**Achievement Measures**

Achievement testing is another component of a quality gifted identification process. It is widely believed by much research that the best way to predict a student’s future academic performance in a given area (such as mathematics) is to measure how well that child has done in the past in that area (Erwin & Worrell, 2012). Lohman (2005b) also believed that the best way to identify academic giftedness (or future high performance in a certain subject) was through standardized academic testing. The Talent Search Model uses above-level testing to identify particularly gifted students from an already top group of test taking students by giving the EXPLORE, ACT, or SAT tests to students who are several grade levels below the normal population to take such a test (Assouline & Lupkowski-Shoplik, 2012). When considering using achievement testing to identify high performing students for inclusion into a gifted program, achievement testing is a vital of piece information. It is clear from the research that using a single score to determine giftedness, even if it is an ability or IQ score, is not best practice, achievement testing can help to create a system where multiple measures are used (Friedman-
Nimz, 2009). Using an achievement test that either has a high ceiling or is an above-level test is a best practice when identifying gifted children because these tests are able to discern the highest achievers and even discern the high achievers from one another (Assouline & Lupkowski-Shoplik, 2012; Erwin & Worrell, 2012).

**Alternative Measures**

Alternative assessments to standardized ability and achievement assessments are sometimes used to either identify more children from minority or poverty backgrounds, or to try to provide multiple measures in the identification process. Performance-based assessments are a non-traditional way of identifying students for inclusion into gifted programming. A performance-based task requires students to demonstrate advanced understanding through their problem-solving processes to give insight into their thinking (VanTassel-Baska, Xuemei Feng, & Evans, 2007). In a large study, North Carolina implemented such a system with the goal to better identify minority and poverty students using a system of ability testing, achievement testing, and also a performance-based assessment (VanTassel-Baska et al., 2007). This process did identify more students from poverty and from minority backgrounds, although there was some caution because all the data were not available to show how the students then performed in their gifted programs (VanTassel-Baska et al., 2007). Further, there is no evidence performance-based assessments add incremental validity to the already commonly used ability and achievement tests (Erwin & Worrell, 2012, p. 80). Still, performance-based assessments are an alternative method for gifted identification, than can be used with ability and achievement testing. Another alternative assessment would be standardized gifted rating scales for teacher or parents to complete. These are popular in usage because they are a qualitative measure that then computes into a quantitative score that can be used alongside other data. The issue these scales
have in actual application is that their psychometric properties vary and are always less reliable and valid than other standardized testing (Erwin & Worrell, 2012).

**Teacher Ratings**

As discussed earlier, teacher recommendations are not generally an effective method to identify gifted students. However, it is still possible to have teachers be a part of the identification process. Erwin and Worrell (2012) stated that if teachers were asked to nominate the children who performed best in the academic areas, that perhaps this would be the best way to use teacher recommendation, trying to eliminate subjectiveness. The teacher, as discussed in the previous paragraph, can use standardized rating scales to help structure the information provided. Other suggestions for helping teachers to become more effective at identifying gifted children include ensuring the teaching staff ethnicity matches the student population ethnicity, and when this is not possible, making sure to train teachers with professional development on multicultural education topics (Speirs Neumeister et al., 2007).

The best identification processes include multiple measures—usually an ability measure along with achievement measures. As discussed earlier, achievement testing in a certain area is the most effective way to predict future performance in that area (Lohman, 2005b). Ability or cognitive testing is also very effective at identifying students with the potential to do well in school, but it must be understood that even ability testing is affected by the student’s schooling and home background (Erwin & Worrell, 2012). The current consensus is that using local norms and comparing students with students like themselves is the best way to both identify gifted students and make sure to include more minority and students from poverty backgrounds (Erwin & Worrell, 2012; Lohman, 2005b). There also needs to be alternative paths into the gifted program for minority or students from poverty if they show potential but are not ready for gifted
programming just yet (Lohman, 2005b). Alternative assessments can be used as a part of the identification process as well, but these must be used with caution because often their psychometric properties are not as solid as standardized ability or achievement tests. Teacher recommendations or rating scales would fit into this area as a qualitative measure. Another important point is that it is vital that a cut line of say the top 3-5% of students are gifted not be used because “giftedness is not a fact of nature, but instead is a social construction” (Borland, 2009, p. 237). There needs to be a flexibility when identifying gifted students, using multiple measures and local norms.

In conclusion, any identification process for identifying gifted students must use multiple measures, including quality standardized ability and achievement testing, must use local norms to compare students who are similar in home and schooling background, and must include all stakeholders in the process. Because of the many pitfalls and perils in the identification of gifted students, it is necessary to have a deep knowledge of the instruments and processes being used to identify giftedness and to understand their strengths and weaknesses.

**Dynamic Indicators of Basic Early Literacy Skills (DIBELS)**

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) is a benchmark and progress monitoring assessment that is designed to measure foundational early literacy skills (Good, Kaminski, Cummings et al., 2011). DIBELS Next is a recent revision of the DIBELS tests that have been through several revisions over the past years (Good, Kaminski, Cummings et al., 2011). The DIBELS Next Assessment Manual states that the highlights of this test are that they are quick and easy to administer, these tests can serve as a universal screener, can identify students in need of interventions, evaluation of the effectiveness of interventions, and can support Response to Intervention (Good, Kaminski, Cummings et al., 2011). The basic early
literacy skills that the DIBELS assessments assess are phonemic awareness, phonics, fluency, vocabulary and language skills, and reading comprehension (Good, Kaminski, Dewey et al., 2011). According to the DIBELS Next technical manual, being able to assess early literacy skills can differentiate between students who are moving towards becoming successful readers, and those who are not progressing towards literacy (Good, Kaminski, Dewey et al., 2011). The technical manual does make it clear however that these DIBELS measures are not meant to be comprehensive in nature, but instead are to measure components that combine to predict reading ability (Good, Kaminski, Dewey et al., 2011). When an educator begins to learn about using DIBELS, acronyms for first sound fluency (FSF) and DIBELS Oral Reading Fluency (DORF) become part of the vernacular of using this testing (Good, Kaminski, Dewey et al., 2011). Other important components of DIBELS are nonsense word fluency (NWF) and phoneme segmentation fluency (PSF; Good, Kaminski, Dewey et al., 2011).

One characteristic immediately noticeable when administering DIBELS is that everything is timed. DIBELS measures fluency and automaticity and the philosophy behind the need for speed in reading is because the pace of reading can equate into how good of a reader that person is (Good, Kaminski, Dewey et al., 2011). The technical manual is clear that oral reading fluency alone is not a complete picture of fluency, but instead it is important to add sub-processes such as letters and phonemic awareness (Good, Kaminski, Dewey et al., 2011).

The technical manual states that DIBELS were based upon principles from curriculum-based measurement and general outcome measurement (Good, Kaminski, Dewey et al., 2011). The technical manual contrasts these principles with other formative assessment such as end of unit tests (Good, Kaminski, Dewey et al., 2011). Because DIBELS Next is a general outcome measurement, they are designed to be standardized, have alternate forms, brief and repeatable,
reliable, valid, and sensitive enough to measure student growth with a short time difference between administrations (Good, Kaminski, Dewey et al., 2011).

Using DIBELS Next for the purpose of identifying students as gifted is a usage of the assessment that is increasing because it is readily available at most primary grade levels in Indiana. The DIBELS Next technical manual is clear that appropriate uses for DIBELS includes: identifying students who are at risk for reading problems, identifying reading areas to target additional support, monitoring at risk students, and researching the quality and effectiveness of a school or district’s intervention system of supports for students (Good, Kaminski, Dewey et al., 2011). However, the technical manual also spells out the inappropriate uses of DIBELS testing: labeling, tracking, or grading students; making retention or promotion decisions, evaluating teachers, using results to decide about funding of programs, and using results for merit pay or school performance rewards (Good, Kaminski, Cummings et al., 2011).

The first point above under the inappropriate uses states that it is inappropriate to use DIBELS to label or track students. Labeling and tracking refers to placing students into programs such as special education or gifted programs. The technical manual makes the point that DIBELS was not designed for this purpose. Instead, it was constructed to identify and then progress monitor students as reading skills are developed.

There have been many studies that have looked at the ability of DIBELS to predict future reading comprehension performance. DIBELS ORF has been shown to have a strong predictive ability on both state and nationally standardized assessments, when trying to identify students who will struggle to be on grade level in the future (Goffreda, Diperna, & Pedersen, 2009; Roehrig, Petscher, Nettles, Hudson, & Torgesen, 2008; Rouse & Fantuzzo, 2006; Schilling, Carlisle, Scott, & Ji Zeng, 2007; D. E. Wood, 2006). However, another recent study examined
the effectiveness of DIBELS ORF on predicting performance of low- and high-socioeconomic status students and found that it had a high predictability for high social economic status students, but was not as effective with low socioeconomic status students (Paleologos & Brabham, 2011). The study went on to warn that DIBELS did not effectively identify low socioeconomic status students who would be in need of intervention, and that teachers perhaps already had better information on these students struggles from other sources (Paleologos & Brabham, 2011). The study continued that DIBELS ORF was not alone enough to effectively predict reading comprehension (Paleologos & Brabham, 2011). Teachers also have widely varying opinions of DIBELS and its effectiveness. Many who give the testing may not understand its purpose and may not be able to utilize its results (Hoffman et al., 2009). A different study looked at the ability of DIBELS nonsense word fluency (NWF) to identify English language learners who are in need of more interventions and found that NWF was very effective when used for this purpose (Vanderwood, Linklater, & Healy, 2008). NWF and to a smaller measure letter-name fluency (LNF) were found to also be very strong measures of early reading problems (Speece, Mills, Ritchey, & Hillman, 2003). Many studies have spent time looking into the best ways to use tests like DIBELS to identify students who will need extra reading interventions later on because of reading difficulties and most have concluded that DIBELS can identify students who will be in need of reading interventions.

DIBELS is certainly not without its critics. Goodman wrote a book about DIBELS that took many issues with DIBELS, including its widespread use, or misuse as he would say, that decisions about students are being made with DIBELS results, that teachers are being forced to teach to the skills that DIBELS measures, and that DIBELS may not really measure that causes students to become good readers (Goodman, 2006). The concern that teachers will teach to the
indicators of good reading and not to make students good readers themselves is another concern that has education researchers worried (Dessoff, 2007).

DIBELS has been shown to be an effective screening tool to find students who will need systematic reading interventions in order to achieve in reading to state expectations. DIBELS has several subtests, but the NWF and LNF have been found to be especially effective at the intended purpose for DIBELS. It is important to note that DIBELS testing is very widespread with many schools from around the country relying to DIBELS as their No Child Left Behind scientific-based early reading assessment. DIBELS is also used as a progress-monitoring tool to track students’ performance as they build reading prowess. The DIBELS technical manual is very clear that DIBELS is not to be used for high stakes decisions, such as special education or gifted education, or to evaluate teachers. And, the concerns that many experts have towards DIBELS have to do with misusing DIBELS outside of its intended purposes.

Text Reading and Comprehension (TRC)

If a school or district purchases DIBELS through a company such as Wireless Generation, now a part of Amplify, it might choose to purchase mCLASS: Reading 3D, which includes a component called text reading and comprehension (TRC; Wireless Generation, n.d.). TRC is a reading comprehension piece that can accompany DIBELS through Wireless Generation (Wireless Generation, n.d.). There is no technical manual for TRC and it is not clear that there has ever been research done to develop this reading comprehension measure. The brochure available on the Wireless Generation website notes that the MCPS Office of Shared Accountability examined internal and external predictive reliability and determined that TRC aligned with CTBS and the Grade 3 Maryland State Assessment (Wireless Generation, n.d.). However, in visiting the website of the Montgomery County Public Schools Office of Shared
Accountability, there is no such research present to be downloaded. There are three white papers available on the website, but none of them discuss the research behind TRC, or the practical uses for TRC. The research base behind TRC, the proper uses of TRC, and the shortfalls of TRC are a mystery because of a lack of any research or a technical manual for this test. Repeated inquiries to Wireless Generation and Amplify yield no clear answer as to who originally designed the test that is now called TRC or if it has been researched thoroughly for validity and reliability.

As schools use the TRC measure to make decisions about students, it is important to know how this test was developed and if it has validity and reliability for its intended uses. With the absence of a technical manual, any research at all, or any notes on the development of the instrument, we are left to hope that this measure will be an effective measure of reading comprehension.

**Conclusion**

Many school leaders in states like Indiana are wrestling with state mandates to identify and serve gifted students in elementary, secondary, and high school. Or perhaps a school district just wants to better identify its best and brightest students early so they can work to grow these students’ talents from an early age. When an administrator receives the assignment of designing a way to identify these students, the complexity of such a task may not be initially evident. The research shows just how difficult it is to identify students who are gifted, making sure to identify also students who might come from a poverty background or who might be twice exceptional. Making matters even more difficult is making sure to only identify students who fit the local definition of giftedness and making sure that services are actually in place for whomever is identified. An administrator might look for an easy way to identify students at early grades using
ready available tests that students take anyway. One of those early reading tests that are available in many schools and districts across the country is the DIBELS and occasionally the TRC assessments. Using the DIBELS and TRC assessments to identify students for gifted programs is outside of the intended purpose as described in the DIBELS technical manual and in the DIBELS research. After examining the care and planning that must go into identifying students who are gifted, to then use an assessment such as DIBELS or TRC that has not been designed for this purpose could be very inaccurate for the purpose of identifying gifted students. No one test can be perfect, and most are not even close to perfect, but that is why using multiple measures is important. It is vital that any identification process use an ability measure, achievement measures in the areas being identified, and qualitative information to make these high stakes decisions about students’ educational programming. Even more important is to understand that students from poverty backgrounds or students from homes that do not speak English as a first language, or students from minority backgrounds will be underrepresented in gifted programs unless steps are taken to look closer at these students and compare them against students who are from similar backgrounds. Educational paths must be designed to bring students who have potential up to the performance level we know they can achieve. The question of using DIBELS or TRC as a part of a well-rounded gifted identification process is one that has yet to be answered.
Chapter 3: Methodology

As stated earlier, because schools may attempt to use either DIBELS or TRC to help determine which students are gifted, it was necessary to determine if DIBELS or TRC can be used to reliably place students into gifted services. DIBELS and TRC are early reading assessments that are widely used and available to schools from all over the country. In Indiana, the IDOE awards a grant to all schools that use DIBELS in kindergarten through second grade to fidelity to pay for the assessment. The state of Indiana, through legislation, also requires the identification and service of gifted students, starting in kindergarten and going through to Grade 12. Because of these two commonalities in Indiana schools, at least 46 school districts, and perhaps at least as many as 96, are using DIBELS and TRC to make placement decisions for gifted programs (Heiden, 2014; Marschand, 2014a). Research questions are as follows:

1. Do the DIBELS assessments identify giftedness in language arts in children in kindergarten?

2. How well does TRC identify giftedness in language arts?

3. How well does the combination of DIBELS and TRC identify giftedness in language arts?

In order to answer these questions, it was necessary to design a quantitative research study to measure the effectiveness of these assessments in the identification of gifted reading students.

Research Design

The quantitative research study that I designed used archival data from students in the Franklin Community Schools in Franklin, Indiana. I am an elementary school principal in this
school district and also the school district High Ability Coordinator. Because of my positions in the district, I have access to student DIBELS data and TRC data for years in the past, as well as to the data from the high ability identification process that happens each spring for students. The research for this study utilized quantitative research principles using statistical measures to analyze the ability of the DIBELS and TRC assessments to be used for placement into gifted reading/language arts services. The data to be used were archival data on students already considered for placement into gifted programming in the Franklin Community Schools.

Franklin Community Schools uses a well-designed process to identify students into their language arts and math gifted services. The National Association for Gifted Children states that multiple measures of students must be utilized, using assessments that are psychometrically sound (“NAGC Position Paper: The Role of Assessments in the Identification of Gifted Students,” 2008). Franklin Community Schools follows this guidance. Additionally Franklin Community Schools has aligned their high ability identification process with the Indiana Department of Education’s guidance, including utilizing the recommended assessments to complete the identification (“Indiana Department of Education Guidance Document on Identification of High Ability Students,” n.d.). The identification process was designed in consultation with experts in the field of gifted identification and also was examined through the technical assistance process that the IDOE offers to all Indiana school districts. Because the process uses a measurement of potential, achievement measures in each area identified, and a qualitative instrument, the data that is needed is available to the decision-making group. Each instrument selected has been researched and approved for such a purpose and serve as the multiple measures that both the NAGC and the IDOE recommend for any identification process (“Indiana Department of Education Guidance Document on Identification of High Ability..."
Students,” n.d., “NAGC Position Paper: The Role of Assessments in the Identification of Gifted Students,” 2008). Local norms are used throughout the process to make sure that decisions are made about the students in Franklin, Indiana using comparisons of those same students. A group of teachers convenes, led by the high ability coordinator, to look at each subtest of each assessment individually and make decisions on a student-by-student basis without names or identifying information present. The qualitative information allows the committee to look closer at students who are close to placing into services, but do not quite have the needed achievement or potential. This qualitative information allows the committee another glimpse into the student and then the committee can make a good choice about placement. Also, there is a quality appeal procedure so that parents can appeal the committee’s decision and provide any additional information that could help the superintendent’s designee make a defensible choice about placement into gifted services. Through this process, the Franklin Community Schools has designed a process that is thorough and fair and that can make a sound decision about which students require gifted services in language arts or mathematics.

**Description of the Sample**

The sample of students used in this quantitative study were kindergarten students who had been students in Franklin Community Schools during the 2011-2012, 2012-2013, and 2013-2014 school years. The sample was limited to students who were considered for placement into the high ability (gifted) program, or who had DIBELS or TRC scores that were high enough to have high ability placement considered. The sample also had demographic information included as well, such as sex and free or reduced lunch status. I chose this sample because it was a large number of students over three school years, which increased the size of the sample and provided a good base of student information to analyze. A power analysis indicated that for the number of
predictors and variables I used that I needed at least an \( N = 100 \) or more. A power analysis after the sample was gathered showed an observed statistical power of 1.000. I limited my sample to students who actually were a part of the identification process because only those students took the CogAT. The students who were not a part of the full identification process were missing this data and this would not allow me to test one of the important independent variables, the CogAT verbal subtest. Also, because identification procedures varied by the school district, it was necessary to use only students that had been a part of a consistent, research-based identification procedure, such as the one that Franklin Community Schools uses.

**Description of the Instruments**

The instruments I used in this research study was the DIBELS assessments, developed by Drs. Roland Good and Ruth Kaminski, the TRC assessments, developed by the former Wireless Generation Company, the NWEA MAP, and the CogAT developed by Dr. David F. Lohman. The DIBELS testing is a series of subtests typically given at least three times per school year that are supposed to measure the building blocks of reading to measure a child’s progress learning to read (Good, Kaminski, Cummings et al., 2011). TRC is a reading comprehension assessment also given three times per school year, in conjunction with DIBELS and uses leveled readers and reading comprehension questions. NWEA MAP are computer-adaptive achievement tests in reading, math, and language also typically taken three times per school year and are primarily used to measure growth and to identify areas to target instruction (Northwest Evaluation Association, 2011, 2012). The CogAT is an ability or potential measure that aims to measure intelligence by looking at verbal, quantitative, and nonverbal areas and combining those scores to form a composite score (Riverside Publishing, 2012).
Reliability

The reliability of DIBELS is included in the DIBELS Next technical manual draft, and I have summarized it below. The DIBELS Next technical manual draft reports on alternate-form reliability, inter-rater reliability, and standard error of measurement (Good, Kaminski, Dewey et al., 2011). For alternate-form reliability the composite score for first through fifth grades is above .90 which the technical manual claims is reliable enough to make educational decisions (Good, Kaminski, Dewey et al., 2011). For test-retest reliability, the data are less complete with some grade level and tests missing due to small samples or time constraints, but overall the manual reported that NWF, DORF, and the composite score reliability coefficients were adequate for making education decisions (Good, Kaminski, Dewey et al., 2011). As for inter-rater reliable reliability, the technical manual reports that many of the tests the mean scores vary by about 1 point (Good, Kaminski, Dewey et al., 2011). The exception was at third grade but it was actually one student who had an outlier score that skewed the results (Good, Kaminski, Dewey et al., 2011). Finally, for standard error of measurement, the technical manual reports strong confidence in the scores through the estimates completed (Good, Kaminski, Dewey et al., 2011).

The reliability of TRC was not available because neither Wireless Generation nor Amplify could produce a technical manual, a research base for the TRC testing, or point me in the direction of the original developer of the testing. TRC used the University of Chicago’s Strategic Teaching and Evaluation of Progress (STEP) leveled readers through the spring of 2014 but have now switched to a new vendor.

The reliability of the NWEA MAP included reliability information in its technical manual. The manual noted that traditional reliability examinations were difficult because
NWEA MAP is a computer adaptive test and so children took different tests that adjusted for them uniquely (NWEA, 2011). However, the manual noted that instead they measured reliability by comparing tests measured from different item pools. Using this method, the $r$ ranged typically from .700 to .850, showing a moderate to strong reliability (NWEA, 2011). Another way reliability was measured was to use a fall and a spring test administration and follow these students’ scores (NWEA, 2011). The results of this reliability measure had $r$ correlation coefficients that range from in the high .600 range through to the mid-.750 range (NWEA, 2011).

Finally, the Cognitive Abilities Test (CogAT) reliability data is described in the Research and Development Guide (Riverside Publishing, 2012). The authors stated that the part-test method to measure internal consistency was the best indicator and these subtests placed mostly in the .90 range or higher with this type of measurement (Riverside Publishing, 2012). The manual went on to show tables for average standard error of measurement, for conditional standard errors of measurement, and also interestingly the long-term stability of CogAT scores (Riverside Publishing, 2012). In looking at the long-term stability of the CogAT, the composite score was the most stable with the subtests coming in at a lower reliability but still stable (Riverside Publishing, 2012).

Validity

The validity of DIBELS and TRC as described by the technical manual draft included information on content validity, criterion-related validity, predictive validity, and discriminant validity. The technical manual described that each of the design specifications that were used to construct the DIBELS tests were created a test that should have a maximized utility and sensitivity (Good, Kaminski, Dewey et al., 2011). As for criterion-related validity, other
assessment instruments were used such as Group Reading Assessment and Diagnostic Evaluation (GRADE), the 4th grade passage from the NAEP, the Special Study of Oral Reading, and the Comprehensive Test of Phonological Processing (CTOPP). Looking first at the DIBELS to GRADE comparison, the results are a moderate to strong relation for most all of the tests and subtests (Good, Kaminski, Dewey et al., 2011). The criterion-related validity evidence was not as strong when DIBELS was compared to CTOPP information, but was still mostly moderate to moderate-strong (Good Kaminski, Dewey et al., 2011). Next the technical manual compared DIBELS tests with each other to see how they did in predicting each other’s results and the data varied with some showing a higher criterion-related validity than others (Good, Kaminski, Dewey et al., 2011). The composite scores in DIBELS did have a strong overall validity in most aspects of the testing (Good, Kaminski, Dewey et al., 2011). The final type of validity measured was discriminant validity and DIBELS performed well with its able prediction of the differences between two separate-performing groups of students (Good, Kaminski, Dewey et al., 2011).

Unfortunately, validity data is not available for TRC since the origins of this test is unknown.

The validity of the NWEA MAP was examined in several ways by the technical manual. Content validity was explained by describing how NWEA MAP was aligned to state standards to make sure that the test was measuring what it needed to and that its questions in the question bank were properly linked to academic standards which vary by state (NWEA, 2011). Also, concurrent validity was measured by comparing a child’s NWEA MAP result to a different achievement test that is supposed to measure a similar skill and the results from this showed a strong mid-.80s or higher (with tests that have performance items and subjective scoring showing a lower correlation than tests that are fully multiple choice like the NWEA MAP) (NWEA, 2011).
Finally, looking at the CogAT, the validity of the CogAT 7 was measured when it was compared with previous versions of the CogAT, as well as comparing it with the NNAT and the Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV; Riverside Publishing, 2012). The results were expected for both with strong correlations (Riverside Publishing, 2012). The final correlation was using the CogAT and the Iowa Assessments which is a full achievement testing battery which has been designed to complement the CogAT (Riverside Publishing, 2012). This correlation demonstrated that the verbal CogAT scores were more likely to predict higher achievement than the nonverbal battery and that if you did combine the quantitative and nonverbal together then there was a stronger correlation than just using the nonverbal subtest by itself (Riverside Publishing, 2012). The nonverbal battery seems to be less linked to actual academic achievement than do the other two batteries (Riverside Publishing, 2012).

**Data Collection**

Collecting the DIBELS and TRC data from students was completed using the online data management system maintained by Wireless Generation/Amplify. The NWEA MAP data were taken directly from the NWEA Reports website. The CogAT data were taken from internally-managed spreadsheets that contained the data from the high ability identification process in the Franklin Community Schools. The student demographic information was exported from the school district’s student management software called PowerSchool. All of this data were compiled into one spreadsheet, with one row for each student that contained all of the data for each of these students. Some of the data were hand-entered from these sources, and other data were exported and merged into the spreadsheet. The master spreadsheet kept students’ identities private by using random numbers instead of their names.
**Data Analysis**

Once all of the data were compiled into the spreadsheet, logistical regression methods were used to examine the significance of the DIBELS subtests and the TRC assessments using the results of the multifaceted high ability process in the Franklin Community Schools as a comparison. Finding how accurate the DIBELS subtests and TRC assessments had been in identifying any student for high ability reading services was revealed.

**Limitations**

The most significant limitation of this research study was that only students from one school district were included in the sample. Although this also made for a consistent high ability identification process for each child, it did limit this study. Another limitation of this study was that the race make-up of the students in the sample were mostly Caucasian/White.

**Summary**

In summary, this study was a quantitative study using archival data from kindergarten through second grade students in the Franklin Community Schools during the 2011-2012, 2012-2013, and 2013-2014 school years. DIBELS, TRC, NWEA Reading MAP, and CogAT results were utilized, along with the documentation of which students were placed into the school district’s high ability program, to reveal the predictive reliability of the DIBELS and TRC assessments to place students into a high ability language arts program.
Chapter 4: Results

Certainly, there is much research on identification plans to find students who should be a part of gifted programs, but no studies have been found to test if DIBELS and/or TRC can be used to properly identify students who should take part in gifted programs. The implications of a lack of research into this question has been detailed more in Chapters 1 and 2, but since there are Indiana school districts using DIBELS and TRC as a part of their identification procedures, it is necessary to find out if these assessments can be used for this purpose. The technical manual of DIBELS states that the results of DIBELS testing should not be used for high stakes decisions (such as placement into special education or gifted programs), but is silent on any research that has been conducted in this area (Good III, Kaminski, Dewey, et al., 2011). As described earlier as well, DIBELS researchers and designers Dr. Roland Good III and Katherine Bravo Aguayo both responded to my inquiry about existing research and stated that they were not aware of any research that examined the ability of DIBELS to identify students for gifted programs (K. Bravo Aguayo, personal communication, September 22, 2014; R. Good III, personal communication, September 22, 2014). With this in mind, the present study attempted to examine these research questions:

1. Do the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments identify giftedness in language arts in children in Kindergarten?

2. How well does Text Reading and Comprehension (TRC) identify giftedness in language arts?

3. How well does the combination of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading and Comprehension (TRC) identify giftedness in language arts?
Three years of student testing data were compiled from Franklin Community Schools kindergarten students and this data were used to determine if DIBELS and TRC could be effective for gifted reading program identification. Franklin Community Schools had a gifted program identification process that was defensible and based upon the most recent research of most effective practices for gifted program identification. Though DIBELS and TRC assessment results were not used as a part of the gifted program identification process, those assessments are used for all kindergarten students. This allowed me to examine the testing information and determine if DIBELS and/or TRC could have been used to identify students for the gifted reading program. The current Franklin Community Schools identification process uses the Cognitive Ability Test as a measure of ability/potential and the NWEA MAP reading and math tests as achievement measures. Though this data were not used, Franklin Community Schools also used a qualitative tool called the Scales for Identifying Gifted Students (SIGS) as well.

**Data Set**

The data set used for this research study was a set of 386 students who were kindergarten students in the Franklin Community Schools during the 2011-2012, 2012-2013, and 2013-2014 school years. These were kindergarten students who qualified for the identification pool of the gifted identification process during the spring of each of these three school years. To qualify for the identification pool of the identification process the child needed to score in the 85th percentile or higher on the NWEA reading or math tests, or needed to score a 115 Standard Age Score or higher on the CogAT 7 Screener assessment. A parent recommendation (request) or teacher recommendation could also place a child into the identification pool, even if the child did not score at the required levels for inclusion into the identification pool. The students in the identification pool were the students who were considered for placement into the gifted program.
These students took the rest of the CogAT 7. Upon taking the screener portion, the students had completed three of the seven subtests. This data set of 386 students was used to examine the three research questions listed earlier in this chapter. For some of the statistical methods the data set was “cleaned,” to eliminate some outliers in the data to preserve the ability for the methods to work properly.

**Findings Related to the Research Questions**

**Research Question 1:** Do the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments identify giftedness in children in language arts in Kindergarten?

**Hypothesis:** The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments will not identify language arts giftedness in children in kindergarten.

A forward stepwise (Likelihood Ratio) logistical regression was completed to answer this question. Logistical regression was chosen for this quantitative examination because the output in this case is binary. The results are displayed in Table 1.
Table 1

*Forward Stepwise (Likelihood Ratio) Logistical Regression Analysis of CogAT, NWEA Reading and Math, and DIBELS to Placement in a Gifted Reading Program*

<table>
<thead>
<tr>
<th>Step</th>
<th>B</th>
<th>SE</th>
<th>Sig.</th>
<th>Exp. (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CogAT Verbal</td>
<td>.132</td>
<td>.015</td>
<td>.000***</td>
<td>1.142</td>
</tr>
<tr>
<td>Constant</td>
<td>-15.910</td>
<td>1.788</td>
<td>.000***</td>
<td>.000</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CogAT Verbal</td>
<td>.157</td>
<td>.019</td>
<td>.000***</td>
<td>1.170</td>
</tr>
<tr>
<td>TRC</td>
<td></td>
<td></td>
<td>.000***</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-18.128</td>
<td>2.632</td>
<td>.000***</td>
<td>.000</td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NWEA Reading RIT</td>
<td>.069</td>
<td>.023</td>
<td>.008**</td>
<td>1.071</td>
</tr>
<tr>
<td>CogAT Verbal</td>
<td>.161</td>
<td>.020</td>
<td>.000***</td>
<td>1.175</td>
</tr>
<tr>
<td>TRC</td>
<td></td>
<td></td>
<td>.004**</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-30.989</td>
<td>5.111</td>
<td>.000***</td>
<td>.000</td>
</tr>
<tr>
<td>Step 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NWEA Reading RIT</td>
<td>.062</td>
<td>.021</td>
<td>.003**</td>
<td>1.064</td>
</tr>
<tr>
<td>CogAT Verbal</td>
<td>.163</td>
<td>.020</td>
<td>.000***</td>
<td>1.177</td>
</tr>
<tr>
<td>DIBELS LNF</td>
<td>.035</td>
<td>.014</td>
<td>.010*</td>
<td>1.036</td>
</tr>
<tr>
<td>TRC</td>
<td></td>
<td></td>
<td>.087</td>
<td>1.036</td>
</tr>
<tr>
<td>Constant</td>
<td>-32.167</td>
<td>5.107</td>
<td>.000***</td>
<td>.000</td>
</tr>
</tbody>
</table>

*p < .05; ** p < .01; *** p < .001
 Note. Constant is placement in gifted program coded as 1 for yes and 0 for no.

The first step was to use all of the independent variables to see their significance to the dependent variable (placement into the gifted program), but only four variables were possibly significant. The next step was to use automatic selection through the IBM Statistical Package for the Social Sciences (SPSS) to look closer at the results through forward stepwise (likelihood ratio) logistical regression. Exploring these results one can see that the top independent variable
for predicting the dependent variable (placement into a gifted program) is the CogAT Verbal score. The verbal score is the CogAT subtest that looked at verbal reasoning and intelligence. The NWEA Reading test was next for highest significance. When the forward stepwise (likelihood ratio) logistical regression model looked for an additional step it was able to barely, but did, show significance for the DIBELS subtest of Letter Naming Fluency (LNF). The significance of .010 was under the .05 threshold for statistical significance. So, the three independent variables that could predict the dependent variable (placement into the gifted program) were CogAT Verbal, NWEA Reading RIT, and DIBELS LNF. The TRC assessment, Text and Reading Comprehension, showed significance until the final step. It finished with a significance of \( p = 0.087 \), which was not under the threshold of .05. The other variables were not significant, meaning they were not at a .05 or less. These variables that were not significant included the TRC assessment and all of the DIBELS subtests (except for the LNF), and also the DIBELS Composite score.

Another look at the data set was possible through a different form of logistical regression in which all variables were compared to the dependable variable of placement in a gifted program. The results are in the Table 2.
Table 2

**Logistical Regression Analysis of all Variables in Dataset to Placement in a Gifted Reading Program**

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Sig.</th>
<th>Exp. (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NWEA Reading RIT</td>
<td>.059</td>
<td>.020</td>
<td>.003**</td>
<td>1.061</td>
</tr>
<tr>
<td>CogAT Verbal</td>
<td>.163</td>
<td>.020</td>
<td>.000***</td>
<td>1.177</td>
</tr>
<tr>
<td>DIBELS Composite</td>
<td>-.022</td>
<td>.017</td>
<td>.187</td>
<td>.978</td>
</tr>
<tr>
<td>DIBELS FSF</td>
<td>.024</td>
<td>.027</td>
<td>.386</td>
<td>1.024</td>
</tr>
<tr>
<td>DIBELS LNF</td>
<td>.061</td>
<td>.027</td>
<td>.032*</td>
<td>1.063</td>
</tr>
<tr>
<td>DIBELS PSF</td>
<td>.036</td>
<td>.024</td>
<td>.145</td>
<td>1.036</td>
</tr>
<tr>
<td>DIBELS NWF/WWR</td>
<td>.043</td>
<td>.033</td>
<td>.194</td>
<td>1.044</td>
</tr>
<tr>
<td>TRC Level</td>
<td></td>
<td></td>
<td></td>
<td>.120</td>
</tr>
<tr>
<td>Constant</td>
<td>-31.695</td>
<td>5.124</td>
<td>.000***</td>
<td></td>
</tr>
</tbody>
</table>

* *p < .05; **p < .01; ***p < .001

*Note. Constant is placement in gifted program coded as 1 for yes and 0 for no.*

Examining the results of the logistical regression with all variables present and not eliminated with a forward stepwise (likelihood ratio) process, there were three variables that showed significance by a score of .05 or less. These variables were NWEA Reading RIT, CogAT Verbal, and DIBELS LNF. The CogAT Verbal subtest, which measures the verbal reasoning potential of students, showed the highest level of significance, with NWEA Reading RIT also showing significance. The NWEA Reading RIT is a measurement of current reading achievement in students. The third variable that showed significance, though just barely, was the DIBELS Letter Naming Fluency (LNF). These levels of significance showed that these three
assessments were able to predict placement into the gifted program. The CogAT Verbal and NWEA Reading RIT were best able to make that prediction, with DIBELS LNF also able to predict at a lower level of significance. The DIBELS Composite, DIBELS FSF, DIBELS PSF, DIBELS NWF/WWR, and TRC variables in the data set did not show significance and, therefore, were not effective in predicting placement into the gifted program. As noted earlier in Table 1, TRC had shown significance using the forward stepwise (likelihood ratio) logistical regression through the first three steps. However, by the final step it ceased showing significance. When all of the variables were left in for the logistical regression, TRC missed the .05 level for significance coming in at $p = .120$.

Research Question 2: How well does Text Reading and Comprehension (TRC) identify giftedness in language arts?

Hypothesis: Text Reading and Comprehension (TRC) will not identify language arts giftedness in Kindergarten students.

The TRC (Text and Reading Comprehension) assessments are a package that comes with DIBELS when purchased through Amplify (formerly Wireless Generation). Though not much can be known about TRC since there does not seem to be a technical manual and even the company that sells this assessment cannot describe the research behind it (because there likely is none), it is seemingly a basic reading comprehension assessment series. It places students into a category of reaching achievement such as a level A, B, C, and so on. The higher the letter indicates better reading comprehension according to this assessment. The goal for all kindergarten students is to be at a letter C by the end of the school year. To allow the logistical regression to examine the TRC assessments in relation to placement into a gifted program, the letters were changed into numbers so that $A = 2$, $B = 3$, and so on through the achieved levels.
The same logistical regression that was run to answer the first research question included the TRC independent variable and no significance was found for it to predict placement into a gifted program. Table 2 showed the results of the logistical regression and the TRC variable had a significance of .120, which is not significant.

Probing further into the TRC assessment and how it compares to other utilized assessments, it is possible to compare it to the CogAT verbal subtest score. To be fair these are two different types of assessments. TRC is a reading comprehension assessment and the CogAT verbal is a potential or intelligence measure in the verbal area of intelligence. Still, there should be some level of correlation between the two assessments since stronger verbal potential usually results in higher reading comprehension. The results of comparing accomplished levels of the TRC test are contained in Table 3.

Table 3

*Comparison of TRC Level to Mean CogAT Verbal Subtest Scores*

<table>
<thead>
<tr>
<th>TRC Level</th>
<th>N</th>
<th>CogAT Verbal Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (RB)</td>
<td>62</td>
<td>112.60</td>
<td>11.277</td>
</tr>
<tr>
<td>3 (B)</td>
<td>169</td>
<td>110.91</td>
<td>13.255</td>
</tr>
<tr>
<td>4 (C)</td>
<td>88</td>
<td>111.82</td>
<td>11.999</td>
</tr>
<tr>
<td>6 (E)</td>
<td>37</td>
<td>112.76</td>
<td>10.963</td>
</tr>
<tr>
<td>8 (G)</td>
<td>9</td>
<td>121.33</td>
<td>12.166</td>
</tr>
<tr>
<td>Total</td>
<td>365</td>
<td>111.96</td>
<td>12.441</td>
</tr>
</tbody>
</table>

*Note.* Total N in dataset is 386 students. The dataset was cleaned to remove outliers and to allow the statistical processing to occur properly.
Examining Table 3, it is clear that there is no difference of note between students who score at a level RB, B, C, or E on the TRC assessment. The RB level is typical for a beginning kindergarten student who would be considered proficient (on grade level) (“mCLASS: Reading 3D - Text Reading and Comprehension: Setting Cut Points for the Amplify Atlas Book Set,” 2014). A level B student would be a proficient middle-of-the-year kindergarten student and a level C student would be a proficient end-of-year kindergarten student (“mCLASS: Reading 3D - Text Reading and Comprehension: Setting Cut Points for the Amplify Atlas Book Set,” 2014). Levels E and G are well above the kindergarten reading comprehension expectation with a level E being above proficient for a end-of-year kindergarten student or nearly at proficient for a middle-of-the-year first grade student (“mCLASS: Reading 3D - Text Reading and Comprehension: Setting Cut Points for the Amplify Atlas Book Set,” 2014). A level G is a proficient middle-of-the-year first grade student (“mCLASS: Reading 3D - Text Reading and Comprehension: Setting Cut Points for the Amplify Atlas Book Set,” 2014).

The mean on the CogAT Verbal subtest was basically the same from a level RB through a level E, even though a student reading at the RB level and a student reading at the E level, though both kindergarten students tested at the same time, would actually be reading at more than a grade level apart. Yet, their mean scores on the CogAT Verbal test were basically the same. There was a difference though with the level G. Though the number of students at that level in this sample was only nine students, their average CogAT Verbal score was higher at a mean of 121.33. This result showed that if the TRC score was a full grade level higher than the current grade level there was an increase in the average CogAT Verbal subtest score.

Another point that should be noted is that the average mean for the 365 students was 111.86, which is nearly a standard deviation higher than the mean for the CogAT Verbal, which
would be 100. But, this group of students were the ones selected to be in the testing pool, so these were higher achieving and/or higher potential students than the general population of students in the schools.

Research Question 3: How well does the combination of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading and Comprehension (TRC) identify giftedness in language arts?

Hypothesis: The combination of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading and Comprehension (TRC) will not correctly identify giftedness in language arts.

The process that Franklin Community Schools use to identify students for placement into the gifted program was to look at each score separately from each assessment that is considered in the process for placement. In Franklin Community Schools that is the three CogAT subtests and the composite score, the NWEA MAP Reading and Math scores, and the quantitative Scales for Identifying Gifted Students (SIGS) information. Students are compared with other students and against local norms and can place into the gifted program in reading, math, or both areas. Students can place into reading, for example, with a strong score on the NWEA MAP Reading test or a strong score on the CogAT Verbal test. Sometimes students have strong scores across the board and then they can qualify for both reading and math placement.

The DIBELS and TRC assessments are not used in the Franklin Community Schools gifted identification process because they have not been researched and validated for the purpose of placement decisions into gifted programs. However, it is important to know if they could serve this purpose since districts from across the state of Indiana are using them for gifted
identification. Also, using these “free” assessments could save districts valuable resources. The logistical regression completed using the dataset and outlined in Tables 1 and 2 indicate that neither the DIBELS assessments nor the TRC assessments would have been able to identify the students that actually were identified using a researched and defendable identification process. The one DIBELS subtest that did show some promise was the DIBELS LNF. This subtest, when looked at through the forward stepwise (likelihood ratio) logistical regression did show in Step 4 that it could be significant. When a logistical regression was completed without the forward stepwise (likelihood ratio) process employed, meaning all of the variables were left in the process, the DIBELS LNF variable was deemed to be significant as well ($p = .032$). If a process to identify gifted students were employed, using the same dataset, but instead using DIBELS and TRC assessment results, different students would have been identified than those identified using the CogAT and NWEA MAP assessments. The one DIBELS subtest that could have been effective was the DIBELS LNF subtest.
Chapter 5: Summary of the Study

The technical manual for DIBELS is clear that DIBELS should not be used for high-stakes decision making (Good III, Kaminski, Dewey, et al., 2011). High-stakes decisions in education tend to include such decisions as placement into special education programs, placement into gifted programs, or even retention into the same grade level for the next school year. Even though the technical manual for the DIBELS assessments creates a well-defined direction for the proper uses of this formative assessment, there is evidence that school districts from around the state of Indiana are improperly using this assessment series (per the original intent and also completed research on the assessments) to make determinations about placement of students into gifted programs (Heiden, 2014; Marschand, 2014a, 2014b).

When one of the original creators and a current researcher of the DIBELS assessments was asked if the DIBELS assessments had ever been studied for use in placement into gifted programs, both answered with a direct and complete no (K. Bravo Aguayo, personal communication, September 22, 2014; R. Good III, personal communication, September 22, 2014). Such off-label usage of assessments is not a new occurrence, but examining to see if the DIBELS and TRC assessments could be utilized for this purpose was necessary because of the already widespread usage of the assessments to identify students into a gifted program. This problem was addressed by this study.

Three school years of kindergarten students who were selected to be in the identification pool for possible placement into the gifted program in Franklin Community Schools were examined to determine if the DIBELS and TRC assessments could have been used to reach the same conclusion about placement in the gifted program. Franklin Community Schools has a
quality gifted identification process that uses assessments that are evidence based for use in the placement of students into gifted programs.

**Discussion of the Findings**

Using logistical regression to determine if any of the DIBELS assessments or the TRC assessment could show significance towards the final decision of placement into a gifted program was the process used in the present study to examine the research questions. No research studies were found that examined the usage of DIBELS for gifted program consideration, and the researchers on the DIBELS research team were also not aware of any such research completed (K. Bravo Aguayo, personal communication, September 22, 2014; R. Good III, personal communication, September 22, 2014). As shown earlier in Table 2, only one of the DIBELS assessments (DIBELS LNF) was able to show significance through the logistical regression process.

The three assessments that did show significance through logistical regression were the CogAT Verbal, NWEA Reading RIT, and DIBELS LNF assessments, \( p = .000 \), \( p = .003 \) and \( p = .032 \) respectively. It was logical that the first two these three assessments would show significance because they were the decision-making assessments that Franklin Community Schools used through their identification processes. However, it was surprising that DIBELS LNF showed significance because the purpose of this subtest is for students to name letters in lowercase and uppercase (Good III, Kaminski, Dewey, et al., 2011). None of the other DIBELS subtests or the DIBELS showed significance, but this one subtest did show significance. It is also important to note that TRC did not show significance, \( p = .120 \).
**Research Question 1**

Do the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments identify giftedness in language arts in children in kindergarten?

Hypothesis: The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments will not identify language arts giftedness in children in kindergarten.

I hypothesized that the DIBELS assessments would not be able to show significance when examined as part of a research-based gifted identification process. The hypothesis was proven to be true because most of the DIBELS assessments, and especially the DIBELS Composite score, did not show significance when examined through the logistical regression process. Table 2 showed that only one of the DIBELS subtests or the DIBELS composite score were shown to have significance toward the dependent variable of program placement. The subtest that did meet the significance threshold of .05 was the DIBELS LNF subtest, \( p = .032 \). This subtest is the Letter Naming Fluency portion of DIBELS. This portion of DIBELS is very simple in that the test measures the student’s ability to name lowercase and uppercase letters, while being timed (Good III, Kaminski, Dewey, et al., 2011). This subtest is not the most complex portion of DIBELS, nor does it require even the most advanced reading. It is really just naming letters. However, the DIBELS Technical Manual does state that naming letters fluently predicts future reading performance (Good III, Kaminski, Dewey, et al., 2011). It may be that students who are very quick and efficient at naming letters also are very strong readers. Much as it might be possible to find runners who would be great sprinters through having them run marathons, the more efficient path would be to have them to run sprints. The DIBELS LNF subtest likely has the same effect. It is partially able to discern intelligence or high achievement in reading through students quickly being able to quickly name letters of the alphabet.
It should not be surprising that the DIBELS assessments are not able to detect giftedness because these assessments were not designed to accomplish this feat. The DIBELS assessments are “a set of measures used to assess early literacy and reading skills for students from kindergarten through sixth grade” (Good III, Kaminski, Dewey, et al., 2011, p. 1). To rephrase, these assessments are formative assessments designed to help the teacher both track each student’s reading growth and also to know what areas each child needs to work on to continue to learn to become a reader. Though DIBELS can be challenging for students because it is a fluency assessment, in that it is timed, and that it does have a subtest using nonsense words, it is still not designed or researched for measuring intelligence or even reading achievement. Adding credibility to this are the levels of significance as shown in Table 2. The DIBELS subtests ranged from \( p = 0.145 \) to \( p = 0.386 \), not including the LNF subtest.

It is necessary for any school administrator to understand testing and measurement, or at least seek guidance from experts in this field, before selecting assessments to serve a purpose in an educational setting. Assessment is a necessary part of education, but assessments that are not measuring what one hopes or thinks they are measuring will not provide the answers one is seeking through their use. The DIBELS assessments are not designed or researched for the purpose of identification of giftedness in children (K. Bravo Aguayo, personal communication, September 22, 2014; Goffreda et al., 2009; R. Good III, personal communication, September 22, 2014; Good III, Kaminski, Cummings, et al., 2011; Good III, Kaminski, Dewey, et al., 2011; Hoffman et al., 2009; Roehrig et al., 2008; Rouse & Fantuzzo, 2006).

Based on the present study, it can be concluded that DIBELS could not have been used with this dataset of students from Franklin Community Schools during the giftedness identification process of these three school years. Using DIBELS as a part of the process, or
even as additional information during the process, would not have yielded any helpful information, and worse would have actually steered the identification incorrectly as they sought to identify students.

**Research Question 2**

How well does Text Reading and Comprehension (TRC) identify giftedness in language arts?

Hypothesis: Text Reading and Comprehension (TRC) will not identify language arts giftedness in Kindergarten students.

I hypothesized that TRC, the Text Reading Comprehension assessment, would not be able to identify giftedness in kindergarten students. Using logistical regression, as well as comparing achieved TRC levels to those same students’ CogAT verbal scores, this study found that TRC could not effectively predict placement into the gifted program. The significance of the TRC assessments was $p = .120$ as shown in Table 2. This level of significance is not able to provide confidence using TRC as a tool to identify giftedness in students.

Another issue for the TRC assessment is that there does not seem to be any research base for this assessment. I reached out to both Wireless Generation and Amplify, Inc. to acquire a technical manual for the TRC assessment. The companies neither had the manual nor were able to point me in the direction of any developer of the assessment. TRC seems to have been developed by the Wireless Generation company (now a part of Amplify, Inc.) using leveled readers licensed from other companies or education assessment groups. Concerning is that there is no research on this assessment that could be found through searching scholarly databases or through direct contacts at the company who sells the product. The lack of research means that we do not have information about how the assessment was developed or for what purpose it can
be used. We have to trust that it will work to identify reading levels of students, without a research base to tell us that it will complete this task accurately.

Another comparison I completed was to compare TRC scores obtained by the dataset to CogAT verbal scores. Since the CogAT verbal subtest shows the verbal intelligence or ability of students, and students who are very strong in their verbal intelligence usually also have a very strong ability in language, including reading, then there should be some alignment between the two assessments. As discussed in Chapter 4 and shown in Table 3, there was not as much agreement between the two assessments as would be expected. This was also troubling because it would have been expected for the score on the CogAT verbal assessment to rise along with the attained TRC level. The only score on the TRC assessment that showed an increase on the CogAT verbal as well was a level G. The other levels that ranged from a level A through E, which is just over an entire grade level of expected learning, all had a very similar average score on the CogAT verbal assessment. These two approaches to examining the dataset using assessments that were designed for the purpose to judge the effectiveness of the TRC assessments have yielded results that do not give me confidence in using the TRC assessments as a high-stakes measure of reading comprehension. Caution should be used with the TRC assessments in general because of a lack of research base. In this research project, TRC was not effective in predicting placement into a gifted program either, which also means that extreme caution should be used if including TRC as any component of an identification process for a gifted program.

**Research Question 3**

How well does the combination of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading and Comprehension (TRC) identify giftedness in language arts?
Hypothesis: The combination of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading and Comprehension (TRC) will not correctly identify giftedness in language arts.

This hypothesis was also proven to be correct, as well. A quality identification process for placement into a program for gifted learners should use at least an ability measure, an achievement measure for each content area the program serves, and also qualitative measures as well. It is important for each test to stand on its own, in other words to be able to be trusted to be used to place a student into the gifted program. An exception to this might be the qualitative measure since it could vary in its composition and also its usefulness across different identification processes. With the DIBELS assessments and the TRC assessment neither one being researched or proven to be able to be used for identifying giftedness, and with this research indicating that it failed also with this dataset, then it can be concluded that neither assessment can stand on its own, or even in combination with other assessments to be part of a quality giftedness identification process.

Conclusions

The following conclusions were determined based on the research completed during this study:

1. The CogAT Verbal, NWEA Reading RIT, and DIBELS LNF assessments were effective in predicting placement into the gifted program using this data set and identification process.

2. Three of the four DIBELS subtests did not show significance in being able to predict placement into a gifted program in this study. The DIBELS Composite score also did not show significance ($p = .386$). The one subtest that showed significance was the
DIBELS LNF subtest, which did show significance in both the forward stepwise (likelihood ratio) logistical regression process as well as the logistical regression processes. Because three of the four subtests and the DIBELS composite did not show significance, this indicates that DIBELS would not have been effective in placing the appropriate students into the gifted program in this research project.

3. The TRC assessments lack a research base and also were ineffective in this study in predicting placement into the gifted program. Extreme caution should be used with any assessment that has not been thoroughly researched and proven through that research, but in this research it was not effective at predicting placement into a gifted program.

4. Schools from across the state of Indiana are using DIBELS and TRC assessments to identify students for gifted programs (Heiden, 2014; Marschand, 2014a, 2014b). This practice is likely because the assessments are provided free for schools using a grant from the IDOE and educators often use what they have when they attempt to identify students for programs (Heiden, 2014). The IDOE has attempted to dissuade districts from using DIBELS and TRC in their identification processes, but as of Fall 2014, 33 districts, through a survey administered by myself through the IDOE, still reported using DIBELS and TRC as a part of their district’s identification process for their gifted programs (Heiden, 2014). Since the respondents to this survey only represented 118 of 292 districts, it is likely that many more school districts are also continuing to use DIBELS and TRC in their identification processes (Heiden, 2014).

Implications for Practice

Dr. Kristie Speirs Neumeister, a professor at Ball State University and also a consultant
with the IDOE, realized years ago that DIBELS and TRC were being utilized across the state to identify students for gifted programming. Since then she and many other professionals in the field have been working with school districts to cease the use of this assessment for this purpose. This effort has made progress, but there is still much progress to be made since the results of the Fall 2014 still show its widespread usage around the state. This research should provide even more reason to not use DIBELS or TRC assessments as any part of an identification process for identifying gifted learners. DIBELS has been researched and validated to be used for certain purposes that relate to measuring and helping to guide future reading instruction for emerging readers. This should be the lone purpose of this assessment. TRC is more problematic because it does not seem to be scientifically researched. Both assessments performed poorly for the purpose of identifying gifted students in this study, and though the sample size of this study was relatively small compared to a national study and the students sampled were not representative of the U.S. population, it can be concluded that in this study these two assessments were not effective in identifying giftedness in students. These results can be used to cast strong doubt on the effectiveness of either of these assessments for the purpose of identifying gifted students.

An additional fear is that though an administrator may feel that since DIBELS or TRC are used early in the identification process and not as a final decision-making instrument, that this could still be a best practice. The fatal flaw in this thinking is that since DIBELS and TRC are not able to detect giftedness, students may be screened out of the process before it can really begin. The recent study by Hernandez Finch, Speirs Neumeister, Burney, and Cook highlighted this issue as well (2014). This is again why these two assessments cannot be a part of any quality identification process.

It is vital that when a school administrator is designing a process for identifying students
who need to be served by a program for gifted students to fully meet their learning potential, that the administrator select assessment instruments that have been designed for this purpose. The administrator needs to either have the knowledge and background to read the technical manuals for each assessment, or consult with an expert who can advise on the correct assessments to choose. Choosing the assessments that can be properly used is only part of the important process of designing the procedures that will be used for identification of giftedness. The proper utilization of those assessments is vital as well because the results of the assessments taken by students can be confusing and sometimes conclusions are drawn from those results that are not properly applied to decision making. Using multiple measures is important, but what those multiple measures are and when and how they are used is equally important. Just using several different assessment instruments is not good enough if even one assessment is not appropriate. This study has shed light on the improper usage of DIBELS and TRC in identification processes in Indiana and hopefully has clearly indicated why these two assessments should not be a part of an identification process.

Administrators need to either be well versed in educational testing and measurement, or need to know who to ask to help them make these high-stakes decisions. Placement into a program for gifted learners is a big decision and one that should not be taken lightly. Just as deciding if a student should have an Individual Education Plan or deciding to retain a student into the same grade level for the next school year, placement into a gifted program is a decision that needs to be driven by a research-based process. This responsibility that schools and school leaders have is a heavy one and it is my belief that every administrator who is involved in the identification process should approach it from an area of expertise, or at least consult with experts to make sure the process is a sound one.
The placement of a child whose needs are not best served in such a program is a decision that can have a negative impact for the child and gifted program. The child may suffer from low self-esteem from the work being too difficult. Other negative impacts include the lowering of expectations in the overall program because the students identified into the program do not actually required an advanced curriculum and also the possible lowering of expectations and standards in the regular curricular program because so many high achieving students are in the gifted program.

**Recommendations for Further Research**

The results of this study demonstrated that DIBELS and TRC are not assessments that should be used as a part of an identification process. Both assessments failed to predict giftedness in reading in the students in the dataset for this study. However, it is recognized that the dataset was small, at least compared to a typical nationwide study that might have a sample size in the thousands or even hundreds of thousands. Also, the sample used in this study was entirely from a small city in central Indiana, and it did not have the racial or socioeconomic make-up of a national sample. Even though the difficulties of doing such a broad study would be immense because of the wild variability of identification methods for gifted programs, it is my recommendation that the DIBELS and TRC assessments be part of a larger study to examine their effectiveness in identifying giftedness in children.

Additional research could also be done to see what identification processes are used across Indiana or even across the country and which ones are effective. School districts have to individually design their own system, and there is often controversy that accompanies such a decision. Yet, some districts use very high-quality processes and have excellent results, and others use highly suspect identification processes. Research could be conducted that might
advance the cause of quality identification of giftedness. When the right students are identified for gifted programs, districts and schools have a better chance to meet their exceptional educational needs.
APPENDIX A: Franklin Community Schools Letter of Support for Research

To: Mark B Heiden, Doctoral Candidate at Ball State University in Educational Leadership

Re: USING DIBELS NEXT READING FLUENCY OR TEXT READING AND COMPREHENSION ASSESSMENTS TO IDENTIFY GIFTED STUDENTS

Date: September 24, 2014

You have permission to present, collect information, and publish "USING DIBELS NEXT READING FLUENCY OR TEXT READING AND COMPREHENSION ASSESSMENTS TO IDENTIFY GIFTED STUDENTS" to Ball State University during the winter and spring of 2014-2015. You also have permission to use archived student data from Franklin Community Schools from any of the past five school years, specifically demographic information, DIBELS results, TRC results, NWEA MAP results, CogAT results, and other relevant student data as part of the research project. We understand that you will use sound research practices to ensure the confidentiality of any student data or information used and that no student names or individual student demographic information will be shared or published.

Sincerely,

Dr. David Clendening
Superintendent
APPENDIX B: IRB Application

IRB HUMAN SUBJECTS RESEARCH APPLICATION AND PROTOCOL FORM

**PRINCIPAL INVESTIGATOR INFORMATION**

- **Principal Investigator Name:** Mark Helden
- **Current Degree:** Other
- **Department:** Educational Leadership
- **Email:** mbhelden@bsu.edu
- **Affiliation:** BSU Graduate Student
- **Phone Number:** +1 (317) 351-2179

**Principal Investigator Research Experience:**
1. Have you ever been a Principal Investigator?  
   - [ ] Yes  
   - [ ] No
2. How many years have you been conducting research in any capacity?  
   - [ ] Years
3. Have any of your prior studies been suspended or terminated by BSU or a third party?  
   - [ ] Yes  
   - [ ] No
4. Have you or any member of your research staff ever been sanctioned for unethical behavior in research activities?  
   - [ ] Yes  
   - [ ] No

**PRINCIPAL INVESTIGATOR AGREEMENT:**

I have read and understand the Ball State University’s “Policy for the Protection of Human Subjects in Research,” as stated in the Faculty and Professional Personnel Handbook, and I agree:

- a. to accept responsibility for the scientific and ethical conduct of this research study,
- b. to obtain IRB approval prior to revising and altering the research protocol, informed consent, or study documents, and
- c. to immediately report any serious adverse events and/or unanticipated problems as a result of this study to the IRB within 24 hours.

**FACULTY ADVISOR INFORMATION**

If the Principal Investigator (PI) is a STUDENT with Ball State University, a BSU Faculty Member advising or supervising the student must be listed below:

- **Faculty Advisor Name:** Dr. Joseph McKinney
- **Current Degree:** PhD
- **Department:** Educational Leadership
- **Email:** JMCKINNE@bsu.edu
- **Phone Number:** +1 (765) 285-8488

**FACULTY ADVISOR ASSURANCE STATEMENT**

As the Faculty Advisor for this study, I certify that I have reviewed and support this protocol and approve the merit of this research project and the competency of the investigator(s) to conduct the project. My involvement in this study is as follows (Check Box):

- [ ] I will be involved in this project. My name is listed and my responsibilities (described in the Key Personnel section) include supervision and oversight of this project.
KEY PERSONNEL

List all Key Personnel (including Faculty Advisor), other than the PI, who will have a role in the research project (Thesis and Dissertation Committee Members are not required unless they will work with you on your research project).

Add More Personnel

<table>
<thead>
<tr>
<th>Personnel Name</th>
<th>Department/ Organization</th>
<th>Role on the Study</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph McKinney, Ph.D.</td>
<td>Educational Leadership</td>
<td>Faculty Advisor</td>
<td>Chair of my doctoral committee, provides feedback on process and writing</td>
</tr>
<tr>
<td>Kierne Ewanzoul, Ph.D.</td>
<td>Teachers College</td>
<td>Consultant</td>
<td>Provides assistance with quantitative research</td>
</tr>
<tr>
<td>Kristie Speirs Neumeister, Ph.D.</td>
<td>Educational Psychology</td>
<td>Consultant</td>
<td>On my doctoral committee and has provided and will continue to provide guidance for my dissertation</td>
</tr>
</tbody>
</table>

HUMAN SUBJECTS RESEARCH TRAINING

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)

As of January 1, 2010, Ball State University policy requires that all Principal Investigators, Faculty Advisors, and all Key Personnel complete the CITI Training. To comply with the educational requirement, you and all key personnel (including faculty advisor) must have completed the online training modules on the protection of human subjects. For more information and link to CITI’s website, please go to the Office of Research Integrity website.

Have you and all key personnel completed the required online training modules?  Yes  No

NOTE: If this is your first BSU IRB submission, please include a PDF copy of your CITI Training Certificate, along with your Key Personnel.

Responsible Conduct of Research Training Modules (RCR): If your project is federally funded by the National Science Foundation, you and all key personnel (including faculty advisor), must complete the Responsible Conduct of Research Training Modules on CITI, along with the Basic/Refresher Course or Biomedical Course.

OTHER TRAINING

Are there any specialized training(s) required for your project (i.e., certification for medical procedure, training in crisis response, etc.)?  Yes  No

EXPORT AND DEEMED EXPORT CONTROL

The information below is required to be answered as part of the Federal Export and Deemed Export Control Regulations and as part of Ball State University's Export/Deemed Export Control Program. These regulations apply to any transfer of, release of, or access to, controlled technologies/organisms either to a foreign country or by a non-permanent resident foreign national in the United States.
KEY DEFINITIONS:

Foreign National: An individual who is not a natural-born US citizen or;
   (1) is granted permanent residence, as demonstrated by the issuance of a permanent resident visa (i.e., "Green Card");
   (2) is granted US citizenship; or
   (3) is granted status as a "protected person" under 8 U.S.C. 1324b(a)(3).

Dual-Use: The technology/organism has both civilian and military uses.

Fundamental Research: "...basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community." (15 CFR §734.8) In general, for research to be considered "fundamental," it needs to have unrestricted access and/or dissemination (such as through publications, public presentations, available on the internet, etc.). Proprietary results/products (or where these will not be publicly available) are generally not considered fundamental research.

Released: When technology or organisms are available to foreign nationals for visual inspection (such as reading technical specifications, plans, blueprints, etc.); when technology is exchanged orally; or when technology is made available by practice or application under the guidance of persons with knowledge of the technology.

Technology: Specific information necessary for the "development," "production," or "use" of a product.

Use: Specific information necessary for the operation, installation (including on-site installation), maintenance (checking), repair, overhaul and refurbishing of a product.

1. Does the research involve any of the situations below?

   a. US Federally funded and the funder will control/restrict the release of research results/products.
   b. Research is funded by and/or will flow through a foreign government.
   c. Involves proprietary technologies and/or computer/communications source codes.
   d. Uses technologies/organisms that are classified as "dual-use."
   e. The research/data/product has (or will have) release and/or access restrictions (beyond reasonable/standard review period).
   f. Research involves classified information/technology.
   g. Technology/software/data being used is under the exclusive control of the US Government.
   h. Involves controlled/restricted weapons, law enforcement, security/surveillance, and/or non-publicly available encryption technologies and/or information.
   i. Uses GPS technologies in a foreign country.
   j. Technology/software/information will be transferred to, released to and/or left in a foreign country.
   k. Involves items known to be on the Commerce Control List by the Government Printing Office (GPO). The file is updated every 48 hours.
   l. A member of the research team is a non-permanent resident foreign national.

   ☐ Yes  (Complete this section)  ☐ No

If the research/data/product is classified as "fundamental research" or determined to be exempt from Federal Export Control or Deemed Export Control regulations then no special license(s) will be required. If controlled Exports/Deemed Exports are (or will be) involved, then specific Federal Licenses may be required.

RESEARCH PROJECT INFORMATION

Project Title: USING DIBLES NEXT READING FLUENCY OR TEXT READING AND COMPREHENSION ASSESSMENTS TO IDENTIFY GIFTED STUDENTS

*The Project Title must match all documents and IRBNet.

SUBJECT INFORMATION

Total Number of Participants (Estimate or Range): 200-600  Gender: Both Male and Female

Age of Participants: Minimum Age 5  Maximum Age 10

SUBJECT POPULATION

Check all that apply:
☐ Normal Adult Population (18 years or older)

03/10/2014-v8  Page 3 of 11
Students (18 years or older)

Excluded: Children (Minors) / Students (0-17 years)*

Pregnant Women, Physical Experiments, Examinations, or Medical Research*

Prisoners*

People with Diminished Capacities*

Persons undergoing and/or receiving Health, Medical, Rehabilitative, Treatment/Services, etc. *

Persons undergoing Social/Psychological Counseling*

Other (Explain):

*Protected Population: This will require either Expedited or Full Board Review. Please explain the purpose of using this population:

I will be using archived achievement and cognitive assessment data from the past to judge the effectiveness of certain assessments to identify students into a gifted program for elementary-aged students.

SUBJECT RECRUITMENT

1. Will the research project be advertised on any media?  ○ Yes  ○ No

RECRUITMENT PROCEDURES
Describe your recruitment procedures:

None needed because the data already exists.

SUBJECT INCLUSION/EXCLUSION CRITERIA

Inclusion Criteria: A set of conditions that must be met in order for subject(s) to participate in the study (including age of the participants)

The subject must have taken the tests and scored well enough on at least one of the tests to be considered for a gifted program.

Exclusion Criteria: A set of conditions that the subject(s) may not be allowed to participate in the study.

The subject might not have taken some of the tests or might not have scored high enough for consideration of being gifted.

POTENTIAL RISKS/DISCOMFORTS TO THE SUBJECT(S)

Will there be any anticipated or potential risks or discomforts to the subject(s) during the study?  ○ Yes  ○ No

(The federal regulations (45 CFR 46) define minimal risk, "...the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves that those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests."

DECEPTION/COERCION OF SUBJECT(S)

Deception - Withholding information for the purpose of the study.

Coercion - Intimidating, threatening, or force to participate.

Will this project involve either Deception or Coercion?  ○ Yes  ○ No

MINIMIZING THE SUBJECT(S) RISK

Will there be any precautions and safeguards required to minimize the risk(s) to the subject?  ○ Yes  ○ No
If Yes, describe the precautions and safeguards that will be in place to minimize the risks to the subject. For research involving the risk or physical injury, describe the available emergency care in the event of a research-related injury. For research involving psychological risks, describe any plans for intervention (including reporting that may be mandated by federal/state law or licensure) and the events or subject responses that would prompt the exercise of such plans.

All student names will be changed into a random number to maintain confidentiality and ensure that no child could be identified from this research. Also, the research will not be looking for any individual student's performance, but instead will look for how tests perform for the purpose of identifying students for a gifted program.

**SUBJECT AND STUDY BENEFITS**

Will there be any benefits to the subject and/or to the study?  
☐ Yes  ☐ No

**PROJECT SITE LOCATION**

Provide the following information where you will conduct your study (location of data collection, interviews, etc.)

Check all that apply:

☐ Ball State University Campus (including Burriss Laboratory School)

✓ Off-Site Locations or Schools

Locations/Schools: Franklin Community Schools, Franklin, Indiana, USA

☐ Internet (Be sure to read any policy regarding data ownership and protection)

☐ Online Survey Sites (Check all that apply)
  ☐ Qualtrics
  ☐ Survey Monkey
  ☐ InQsit
  ☐ Other

☐ IU Ball Memorial Hospital (Contact Alfreda Bright- abright@iuhealth.org. BMH's IRB)

☐ International Countries

☐ U.S. Based Field Study

☐ Other

**LETTER OF SUPPORT**: Any research that is conducted at a non-BSU institutions or organizations is required to obtain a Letter of Support. The Letter of Support must be on the institution or organization's letterhead and signed by a person of authority to grant access to the site for the study (i.e., Director, Manager, Principal, Superintendent, etc.). The Letter of Support must be uploaded on IRBNet as part of your package submission. An email message is NOT sufficient to meet this requirement.

In cases where sites, agencies, etc., have not been identified yet (original submission), please indicate this in the Application and make sure to upload the letter on your IRBNet project number once the letter is obtained. This is handled as a Modification process once the project has been approved.

**COLLABORATIVE/MULTI-SITE RESEARCH PROJECTS**

Will the proposed research project be conducted as a collaborative research (i.e., research that involves two or more institutions/organizations that hold *Federalwide Assurances* and have duly authorized IRB’s)?

*Federalwide Assurance*: An institution committing to the Department of Health Human Services that will comply with the requirements in the HHS Protection of Human Subjects regulations at 45 CFR part 46.

☐ Yes  ☐ No
**FUNDING**

Have you applied for funding or receive funding for your project? 
- Yes
- No

**DATA-COLLECTION, STORAGE, AND SECURITY**

1. Will any information regarding the participant’s identity (e.g., name, DOB, SSN, ID Number, address, phone, etc.) be collected on Informed Consent(s) or Study Documents?
   - Yes
   - No

2. Are you planning on using the participant’s identifiable information on publications or publications?
   - Yes
   - No

3. Will you be using Audio or Video Recording for your project?
   - Yes
   - No

4. Where will the data (electronic/paper) be stored during and after the study is completed? (Check all that apply):
   - Locked Cabinet/Office
   - Password Protected Computer/Flash Drive/DVD/CD or other Storage Media
   - Home
   - Other

5. How long will you keep the data (raw and final)?
   - 5 Years

   If your data (raw and final) is retained indefinitely, please provide an explanation for why and make sure you have an explanation on the informed consent:

   

6. Who will have access to the raw and final data besides yourself? (Check all that apply):
   - Faculty Advisor
   - Research Team (Co-PI, Research Assistant, Graduate Assistant, etc.)
   - Off-Campus Collaborator or Consultant
   - Sponsor
   - Federal Agency (NIH, FDA, NSF, etc.)
   - Other

**DATA CONFIDENTIALITY/ANONYMITY**

**Anonymous Data:** Defined by where the researcher(s) may not identify the subject with his/her data at any time during the study.

**Confidential Data:** Defined by when coding the identity of the subject and his or her data by using personal identifiers, there exists a means for identifying the subject.

Indicate whether your data is Anonymous or Confidential and explain what provisions will be taken to maintain privacy and security:

**Anonymous Data:** The student’s name will be changed to a random number that can not be linked back to the individual student. This will be completed by school district staff before the data comes to me.
SPECIAL TYPES OF DATA

1. Family Educational Rights and Privacy Act (FERPA)
   A. Will educational records or information found in educational records, as defined by FERPA be used?
   ☐ Yes ☐ No

2. Health Insurance Portability and Accountability Act (HIPAA)
   A. Will health, medical, or psychological records or information found in medical/health records, as defined under HIPAA be used?
   ☐ Yes ☐ No

COMPENSATION

1. Are subjects being paid or receiving incentives for participating in the study?
   ☐ Yes ☐ No

2. Are subjects being reimbursed for expenses (travel, gas, food, hotel, etc.)?
   ☐ Yes ☐ No

3. Will students receive extra credit for a course if they participate in the study?
   ☐ Yes ☐ No

4. Will students receive class or departmental research credit for their participation?
   ☐ Yes ☐ No

5. Is there a completion bonus?
   ☐ Yes ☐ No

6. Will there be compensation for research-related injury?
   ☐ Yes ☐ No

7. Other (Please Explain):

If you are using BSU funds, you will need to contact the BSU Office of University Controller (765-285-8444) or visit their website for procedures and policies regarding tax information to be collected from participants.

SUBJECT FINANCIAL EXPENSES

Will subjects have any financial expenses to participate in the study (i.e., travel, gas, food, hotel, etc.)?
   ☐ Yes ☐ No

NOTE: If a subject has to travel to the location site to participate in the study via car, plane, train, bus, etc., they will incur financial expenses.

STUDY PROTOCOL

STUDY PURPOSE
State the objectives of the research and, when appropriate, any hypotheses you have developed for the research.

I want to provide education leaders the research to be able to decide if the DIBELS and TRC assessments can be used as part of a process to identify students into gifted programs. DIBELS stands for Dynamic Indicators of Basic Early Literacy Skills and is a reading assessment that measures the building blocks of reading. TRC stands for Text Reading Comprehension and is a reading comprehension assessment.

RATIONALE
Explain the need for the research. Describe the data that the project is expected to provide and how the data will contribute to existing information in the field. Provide a concise description of the previous work in the field.

NOTE: If you are planning on using students in your class as research participants, please explain why you want to use them in your study.

The difficulty of properly identifying gifted learners, making sure that not too many students are identified from wealthy families or who are "teacher-pleasers" and making sure to still find gifted students from underserved populations such as poverty, minority, or twice-exceptional groups, has been a subject of much research as well (Fletcher & Speiss Neumeister, 2012; Ford, 1998; Gentry & Kelty, 2004; Gibbons, Pelchar, & Cochran, 2012; Mendaglio, 2003; Naglieri & Ford, 2003; Peterson, 2009; Pierce et al., 2007; Shaunessy, Karnes, & Cobb, Jun2004 Part 2; Speiss Neumeister, Adams, Pierce, Cassady, & Dixon, 2007; VanTassel-Baska, Feng, Swanson, Quek, & Chandler, 2009). Schools often have to balance a robust identification system with the cost and difficulty of implementing such a system. Another challenge is that often the administrator or school leader charged with identifying gifted students does not have any training or background in the identification of gifted students. With these two common issues taking place in most districts, administrators need
to accomplish a complicated and sometimes controversial identification process with limited funds and unfortunately often limited training.

One popular and emerging trend is to use easily available Dynamic Indicators of Basic Early Learning Skills (DIBELS) reading assessment data to identify young students for gifted programming. Since many schools use DIBELS through state grants or other funding, and since school leaders are under pressure to not over-test students, the urge to use this ready and available reading achievement measure is strong. In fact, DIBELS is widely used and available all over the US and Canada with 8293 schools administering the test in 2004-2005 for more than 1.7 million K-3 students (Hoffman, Jenkins, & Dunlap, 2009). Many schools also purchase DIBELS through Wireless Generation, now a part of Amplify, a company that sells a version of DIBELS that can be used through devices like iPads or iPhones. Reviewing the 2012-2013 data provided by the Indiana Department of Education, 46 of 292 school districts in Indiana reported using DIBELS and/or TRC assessments as a part of their gifted identification program (Marschand, 2014a, 2014b). School districts in Indiana self-report on their identification methods and since this is not checked by any agency, it is actually likely that 46 districts is the minimum number of school districts using DIBELS and TRC for gifted identification. The technical manual for DIBELS is clear that gifted program identification is not a proper use of the test, but obviously further research is needed to see if this testing can be used in this way since it was not designed by the authors for this purpose (Good III, Kaminski, Dewey, et al., 2011).

Often accompanying this purchase of DIBELS through Wireless Generation or Amplify is also a reading comprehension measurement called Text Reading and Comprehension (TRC). Since schools may also try to use TRC as a measure of giftedness, it will be important to also look closely at this measurement tool as well.

**RESEARCH REFERENCES/CITATIONS**

List any references/citations that you researched based on your study purpose and rationale for your project. If there are no references or citations used for your project, please explain why.


Hertberg-Davis, H. (2009). Myth 7: Differentiation in the regular classroom is equivalent to gifted programs and is sufficient for classroom teachers have the time, the skill, and the will to differentiate adequately. Gifted Child Quarterly, 53(4), 251–253. doi:10.1177/0016986209346927


Potential-Based Mental Ability Aptitude 2014 final report.xlsx. (n.d.).


METHODS AND PROCEDURES

Describe the study and design in detail and all procedures in which the subject will be asked to participate. If surveys and questionnaires are used for the study, how will they be returned to the researcher? If the research involves more than one visit to the research location, specify the procedures to take place at each session, the amount of time for each session, the amount of time between sessions, and the total duration of the sessions. If multiple researchers will be involved in the project, identify who will conduct which procedure(s).

The quantitative research study that I will design will use archival data from students in the Franklin Community Schools in Franklin, Indiana. I am an elementary school principal in this school district and also the High Ability Coordinator for the school district. Because of my positions in the district, I have access to student DIBELS data and TEC data for years in the past, as well as to the data from the high ability identification process that happens each spring for students. The research for this study will utilize quantitative research principles using statistical measures to analyze the ability of the DIBELS and TEC assessments for gifted program placement. The data used will be archival data on students already considered for placement into gifted programming in the Franklin Community Schools.

Collecting the DIBELS and TEC data from students will be completed through using the online data management system maintained by Wireless Generation/Ampfify. The NWEA MAP data will be taken directly from the NWEA Reports website. The CogAT data will be taken from internally-managed spreadsheets that contain the data from the high ability identification process in the Franklin Community Schools. The student demographic information will be exported from the school district’s student management software called PowerSchool. All of this data will be compiled into one spreadsheet, with one row for each student that will contain all of the data for each of these students. Some of the data will be hand-entered from these sources, while other data will be exported and merged into the spreadsheet. The student name will be changed to a random number immediately and therefore ensure complete confidentiality. This will all be done by a district employee that works with our student data before the data comes to me. Because all of this data is archived and used for purposes of internal research within the school district, for ongoing progress-monitoring of the students, and also for tasks like teacher and school evaluation, no informed consent will be necessary.

INFORMED CONSENT

Please indicate what type(s) of Informed Consent (IC) will be used for this study? (Check all that apply)

☐ Adult (18 years or older)
☐ Parental Permission (Minors: 0-17 years old)
☐ Child Assent (Minors: 0-17 years old - This must be written in age appropriate language)

Informed Consent Process/Signature Waiver

Are you applying for an alteration of the Informed Consent process or a waiver of the Informed Consent signature requirement?  
☐ Yes  ☐ No
If Yes, Check All That Apply:

☐ Anonymous Online or Paper Survey
☐ Phone or Web Interview
☐ Signed Informed Consent will be the ONLY piece of identifiable information collected and there are RISKS associated with IDENTIFICATION
☐ There are significant (additional) risks to participants by signing the Informed Consent
☐ International/Cultural Taboo
☐ Participants are illiterate or literacy comprehension is a significant concern
☒ Other (Explain):

The student data already exists from these previous school years, is used constantly by teachers, principals, and district officials, and no individual student data will be released through this study. All student data will be fully anonymous.

PLEASE NOTE: If English is NOT the primary language of the participants, then the Informed Consent must be also be translated in the participant's native language. Include the translated Informed Consent with your package and a statement as to how (or by whom) the Informed Consent was translated.

PROJECT DOCUMENTS
Check the box(es) of ALL the documents you submitted for your project on IRBNet:

☒ Application and Protocol Form
☐ Adult Informed Consent(s)
☐ Parental Permission Consent (for Minors)
☐ Child Assent (for Minors)
☐ Recruitment Letter(s)
☐ Survey/Questionnaire/Interview Questions
☐ Data Collection Forms
☐ HIPAA/FERA Documents
☐ Media Permission Form(s)
☒ Letters of Support
☐ Debriefing Letter(s)
☒ CITI Training Certificates
☐ Other (Explain):

IRBNET ELECTRONIC SIGNATURE:
The new package created for submission for your project must be electronically signed in IRBNet by you, the Principal Investigator (and Faculty Advisor, if you are a student). Your signature indicates your certification that the information provided in this document is accurate and current.
APPENDIX C: IRB Exempt Approval Letter

Office of Research Integrity
Institutional Review Board (IRB)
2000 University Avenue
Muncie, IN 47306-0155
Phone: 765-285-5070

DATE: December 2, 2014
TO: Mark Heiden
FROM: Ball State University IRB
RE: IRB protocol # 661178-1
TITLE: USING DIBELS NEXT READING FLUENCY OR TEXT READING AND COMPREHENSION ASSESSMENTS TO IDENTIFY GIFTED STUDENTS
SUBMISSION TYPE: New Project
ACTION: APPROVED
DECISION DATE: December 2, 2014
REVIEW TYPE: EXEMPT

The Institutional Review Board reviewed your protocol on December 2, 2014 and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

Exempt Categories:

<table>
<thead>
<tr>
<th>Category 1:</th>
<th>Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 2:</td>
<td>Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior that is not exempt under category 2, if: (i) the human subjects are elected or appointed officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.</td>
</tr>
<tr>
<td>Category 3:</td>
<td>Research involving the collection of study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or</td>
</tr>
<tr>
<td>Category 4:</td>
<td>Research involving the collection of study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or</td>
</tr>
</tbody>
</table>
if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

<table>
<thead>
<tr>
<th>Category 5: Research and demonstration projects which are conducted by or subject to the approval of Department or agency heads, and which are designed to study, evaluate or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in methods or levels of payment for benefits or services under these programs.</th>
</tr>
</thead>
</table>

| Category 6: Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed which contains a food ingredient at or below the level and for a use found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture. |

**Editorial Notes:**

1. **Approved- Exempt**

   While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. **Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project.** Please contact (CRI Staff) if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (http://www.bsu.edu/irb) for review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

**Reminder:** Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.

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Bryan Byers, PhD/Chair  
Institutional Review Board  
Christopher Mangelli, JD, MS, MEd, CIP/Director  
Office of Research Integrity
APPENDIX D: Communication from K. Bravo Aguayo

Begin forwarded message:

**Date:** September 22, 2014 at 1:13:21 PM EDT  
**Subject:** Re: Re: A Question about DIBELS and its usage to identify gifted students  
**From:** Dynamic Measurement Group <info@dibels.org>  
**To:** rhgood@uoregon.edu, Mark B Heiden <mbheiden@gmail.com>, "Heiden, Mark Benjamin" <mbheiden@bsu.edu>

Hi Mark,

I can confirm that we are not aware of any research that has looked at using DIBELS as a measure for identifying gifted learners. We regularly search for scholarly work related to DIBELS, so if something was available we would most likely know about it.

Best wishes,

Katherine

--

Katherine Bravo Aguayo  
Senior Research Assistant  
Dynamic Measurement Group
APPENDIX E: Communication from R. H. Good III

On Mon, 22 Sep 2014, rhgood@uoregon.edu wrote:
Hi Mark,

Thank you for your work and interest in DIBELS, and for your examination of important issues with empirical evidence.

I also greatly appreciate your attention to our technical manual and the purposes for which DIBELS was developed, researched, and validated. Thank you.

With respect to your specific questions:

1. During the process of validating and testing the reliability of DIBELS, did you ever look at if it could be used for identifying gifted children for advanced coursework or placement into a gifted program?

No.

2. Are you aware of any research that has been completed on testing to see if DIBELS can work for the purpose of identifying gifted learners?

No.

Of course, there may be something out there that I have not encountered yet. We try to keep track of DIBELS research and list the articles we encounter at https://dibels.org/papers/DIBELS_references_2013.pdf. A quick search for "gifted" within that document did not get any hits. My team may have run into something, so I am cc'ing info@dibels.org to see if anyone has encountered any articles on the topic.

That said, DIBELS Next provides for early screening of reading skills, including high levels of reading skills, and is specifically designed to be used within a comprehensive, school-wide model of literacy support designed to enhance reading outcomes for all students. As early as Kindergarten, DIBELS Next results predict the likelihood of students experiencing reading success in the future, and provide teachers with instructional areas to target with evidence-based instruction and intervention.

High scores on DIBELS Next, accompanied by high rates of progress in reading proficiency, may indicate the need for more challenging reading material. Our new Lexile(R) Measure reports on DIBELSnet (https://dibels.net/) can provide assistance in identifying appropriate reading materials of the appropriate level of text difficulty.
Best wishes,
Roland

At 10:11 AM 9/21/2014, Mark B Heiden wrote:

Dear Dr. Good,

I am a doctoral candidate in Educational Leadership at Ball State University in Indiana and am working to complete my dissertation. I am also an elementary school principal, high ability (gifted) coordinator for my school district, and a DIBELS user through mClass/Amplify for all of the kids at my school K-2 and also our struggling 3rd and 4th grade students.

It is quite clear from the DIBELS Technical Manual that DIBELS testing results are not appropriate for placing a student into a gifted program, but in a recent survey in my state 46 districts self-reported that they used DIBELS in some step of the identification process for gifted services. Because of this issue, I am writing my dissertation on the ability of DIBELS (and TRC because that comes with our mClass/Amplify testing package, along with DIBELS) to make placement decisions for gifted services. TRC is a reading comprehension assessment.

Without taking too much of your time, please know that I understand that DIBELS is not appropriate for this purpose and wasn't designed to be used in this way. But, even though we are broadcasting this information to the schools that try to utilize DIBELS data in this way, they continue to use it inappropriately. As a DIBELS and TRC user who really respects these formative assessments and the information they give us to make decisions about strategies and interventions for children who are developing readers, and also the ability to judge the effectiveness of these strategies and interventions after a period of using them, I am dismayed that DIBELS is used for the purpose of identifying for gifted services.

I recently successfully defended my dissertation proposal, but one piece of information that my committee would like for me to gather is to reach out to you or one of your colleagues on your team and ask the following questions:

During the process of validating and testing the reliability of DIBELS, did you ever look at if it could be used for identifying gifted children for advanced coursework or placement into a gifted program?

Are you aware of any research that has been completed on testing to
see if DIBELS can work for the purpose of identifying gifted learners?

My research study that I am going to complete is to look at archived data on children in my school district who have placed or were considered for placement into our gifted programs. We have a well-constructed identification process (that doesn't include DIBELS or TRC) to identify students who will need advanced curriculum and materials in my district, so I hope to be able to answer the question, at least in my local school district, of if DIBELS can work for this purpose.

I know that you are very busy and I respect you immensely as I have read much of your work for my literature review section of my in-process dissertation, so if it would be possible to receive an answer from you or one of your research team I would really appreciate it. I would accept any format for such a conversation. An email response, however brief, would be fine, or certainly you or one of your colleagues could call me on my mobile at 317-361-2179. I could also call your office or any of your colleagues at a time of your choosing.

Thank you for considering answering my questions about DIBELS.

Sincerely,

Mark Heiden  
Doctoral Candidate at Ball State University in Educational Leadership  
Principal at Creekside Elementary School in the Franklin Community Schools  
<http://www.franklinschools.org/creekside>  
email: mbheiden(@mbheiden)  
317-361-2179 (mobile)  
317-346-8801 (direct line at school)

Roland H. Good III, Ph.D.  
School Psychology Program  
College of Education  
5208 University of Oregon  
Eugene, OR 97403-5208  
Phone: 541-954-9222  
Fax: 541-346-2897  
email: rhgood@uoregon.edu
References

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http://doi.org/10.1177/0016986209346824

http://doi.org/10.1016/j.lindif.2009.10.012

http://doi.org/10.1207/s15430421tip4402_9


http://doi.org/Article


http://doi.org/10.1177/1529100611418056


http://doi.org/10.1177/0016986209346828

Vita

Mark Benjamin Heiden

OBJECTIVE

I am driven to provide the leadership that ensures a great education for all students.

EDUCATION

Ball State University, Muncie, Indiana
Educational Administration and Supervision
Working Dissertation Title: Using DIBELS Next Reading Fluency or TRC Assessments to Identify Gifted Students

Ball State University, Muncie, Indiana
School Superintendency
Specialist in Education, December 2013

Ball State University, Muncie, Indiana
Educational Administration and Supervision
Master of Arts in Education, May 2009

Ball State University, Muncie, Indiana
Educational Psychology with a specialization in Gifted and Talented Education
Master of Arts, May 2007

Manchester College, North Manchester, Indiana
Elementary Education
Bachelor of Arts, May 2001

LICENSES

Indiana Superintendent P-12
Indiana Building Level Administrator grades K-12
Indiana General Elementary grades 1-6 & 7/8 non-departmentalized
Indiana Gifted and Talented grades K-12

BUILDING LEADERSHIP

2009-present
Principal. Creekside Elementary School in the Franklin Community Schools,

Ø Led an elementary school from declining academic achievement and a D school letter grade to excellent academic achievement and consecutive A school letter grades.
Ø Turned around the culture of our school from eroding to a collaborative We Are Family approach.
Ø Led teachers forward on our Professional Learning Communities journey.
Ø Created a comprehensive communication strategy with key stakeholder groups to result in engaged and pleased school community
DISTRICT LEADERSHIP

2010-present  High Ability Coordinator, Franklin Community Schools, Franklin, IN
➢ Navigated a district gifted program from a program in name only to a state-leading system that uses a multi-faceted identification protocol, excellent academic programming designed for gifted children, outstanding professional development for teachers, and dynamic parent outreach.

2013-2014  Chair, Extracurricular Schedule Committee, Franklin Community Schools, Franklin, IN
➢ Led a year-long systemic process with the local teachers association collective bargaining team to overhaul and align our athletic and non-athletic extracurricular schedule to our district’s guiding principles.

2010-2012  Chair, Elementary Principals Group, Franklin Community Schools, Franklin, IN
➢ Led the collaboration efforts of the elementary principals

TEACHING AND COACHING EXPERIENCE

Hamilton Southeastern Schools
2004-2009  3rd Grade GT REACH Classroom Teacher. Brooks School Elementary, Fishers, IN
2006-2009  Boys Head Varsity Tennis Coach. Hamilton Southeastern High School, Fishers, IN
2004-2005  Boys Assistant Tennis Coach. Hamilton Southeastern High School, Fishers, IN
Manchester Community Schools
2003-2004  3rd Grade GT Cluster Classroom Teacher. Manchester Elementary, North Manchester, IN
2002-2003  3rd & 4th Grade GT Classroom Teacher. Laketon Elementary, Laketon, IN
2001-2002  3rd Grade Classroom Teacher. Manchester Elementary, North Manchester, IN
2001-2004  Girls Head Tennis Coach. Manchester High School, North Manchester, IN
2001-2004  Boys Assistant Tennis Coach. Manchester High School, North Manchester, IN
Spring 2001  1st & 5th Grades Student Teacher. Manchester Elementary, North Manchester, IN

LEADERSHIP SERVICE

2014-present  District 9 President, Indiana Association of School Principals
2014-present  Member, The Children’s Museum of Indianapolis Education Council
2011-present  Board Member, Indiana Association for the Gifted
2010-present  Board Member, Franklin Community Schools Education Foundation/Connection
2011-2013  Advisory Board Member, Ball State Center for Gifted Studies and Talent Development
2013-2014  District 9 Vice-President, Indiana Association of School Principals
2010-2013  District 9 Membership Chair, Indiana Association of School Principals
2004-2009  Hamilton County Community Tennis Association Board of Directors
2001-2004  Manchester College Alumni Board of Directors
2002-2004  Manchester Early Learning Center Board of Directors
PRESENTATIONS AND PUBLICATIONS

Fall 2014  Co-Presented two sessions at the Indiana Association for the Gifted Annual Conference
Fall 2014  Presented to the South Central Superintendents Study Council on High Ability Programming
Fall 2014  Presented “Practical Steps a Principal Can Take to Better Serve Gifted Children” session at the Indiana Association of School Principals Fall Professionals Conference
Fall 2014  Co-Presented “Improving Your High Ability Program: A Systematic Approach” session at the Indiana Association of Public School Superintendents/Indiana Association of School Boards Annual Fall Conference
Spring 2014  Wrote the article “Five Things Every Building Administrator Should Know About High Ability/Gifted” for the April Indiana Association for the Gifted IMAGES newsletter.
Spring 2009  Presented a workshop on understanding Islamic and Middle Eastern Culture to the Hamilton Southeastern Schools Cultural Competency Coaches on March 18, 2009.
Spring 2009  Presented a session at the Indiana Conference on Learning titled “Preparing Students for a Future Global Economy” on February 3, 2009
Spring 2009  Presented to the Hamilton Southeastern Schools Board of School Trustees about my Goethe-Institut trip to Germany, and my Educators to Saudi Arabia trip on February 9, 2009
Fall 2007  Co-presented a session at the National Council for the Social Studies Annual Conference in San Diego titled “Australia: An Ancient, Delicate and Unique Environment.”
Fall 2007  Co-presented with Dr. Flora Reichanadter to the Hamilton Southeastern Schools Board of School Trustees about my Fulbright-Hays trip to China
2005-2006  Presented a series of Brooks School Elementary REACH Parent Discussion Evenings on topics ranging from perfectionism to creativity.
Fall 2006  Presented to the Hamilton Southeastern Schools Board of School Trustees about my Fulbright-Hays trip to Australia
Fall 2005  Presented to the Hamilton Southeastern Schools Board of School Trustees about my Japan Fulbright Memorial Fund trip to Japan

NATIONAL AND INTERNATIONAL EDUCATIONAL EXPERIENCES

Winter 2008  Traveled to Saudi Arabia on the Educators to Saudi Arabia Program
Summer 2008  Traveled to Germany on Goethe-Institut Transatlantic Outreach Program
Summer 2008  Gilder Lehrman Seminar at Columbia University on NYC in the Gilded Age
Winter 2007/08  Traveled to Burkina Faso and Ghana, Africa
Summer 2007  Traveled to China on Fulbright-Hays Group Grant with Valparaiso University
Summer 2006  Traveled to Australia as Fulbright-Hays Summer Seminar Abroad Recipient
Summer 2006  Gilder Lehrman Seminar at Columbia University on Reconstruction era
Summer 2005  Traveled to Japan as a Japan Fulbright Memorial Fund Scholar

PROFESSIONAL DEVELOPMENT

2014  Aspiring Superintendents Workshop by IAPSS
2014  IASP/IAPSS Disparity in Discipline Workshop
2010-2014  IASP Leadership Summer Workshops
2014 Indiana Association of Public School Superintendents/IASB Annual Fall Conference
2009-2014 Indiana Association of School Principals Fall Professionals Conference
2012 Professional Learning Communities at Work Institute w/ Richard DuFour, San Diego, CA
2012 International Center for Leadership in Education Model Schools Conference in Orlando, FL
2010 Ventures for Excellence Teacher Selection Training
2002-2014 Indiana Association for the Gifted Annual Conference
2003, 2006, 2013 National Association for Gifted Children Annual Convention

HONORS AND GRANTS

2015 IDOE $9,800 Indiana Literacy Early Intervention Grant
2014 Indiana Association for the Gifted Leadership Award
2014 IDOE $19,600 Making A Difference Competitive Grant for High Ability Education
2011 IDOE $15,000 Making a Difference Competitive Grant for High Ability Education
2001 Manchester College Outstanding Future Educators (one of top two senior education majors)