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Antecedents to disposition to trust: Online assessment as an enabler of individualized instruction

By

Natalie Cathalyn Campbell

A Dissertation
Submitted to the Faculty of Mississippi State University in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Instructional Systems and Workforce Development in the Department of Instructional Systems and Workforce Development

Mississippi State, Mississippi

August 2017
Antecedents to disposition to trust: Online assessment as an enabler of individualized instruction

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The study investigated the antecedents to disposition to trust with regard to the Accelerated Reader program. The areas considered were teachers’ experience, teachers’ peer experience, teachers’ peer support, gender, and age.

The population for this study consisted of teachers who used Accelerated Reader from four school districts in Louisiana. The total number of teachers who were given the survey was 417, and the number of teachers who completed the survey was 301, resulting in a response rate of 72.2%.

In this study, 6 research questions were addressed. The first question asked whether a statistically significant relationship exists between teachers’ experience in using electronic education tools and their disposition to trust Accelerated Reader technology to facilitate reading instruction. The second question asked if a statistically significant relationship exists between teachers’ peer experience and their disposition to trust Accelerated Reader software technology to improve reading instruction. The third question asked if a statistically significant relationship exists between teachers’ peer support and their disposition to trust that Accelerated Reader software technology
improves reading instruction. The fourth question asked if a relationship exists between teachers’ gender and their disposition to trust that the Accelerated Reader technology will improve reading instruction. The fifth research question asked if a statistically significant relationship exists between teachers’ age and their disposition to trust that the Accelerated Reader technology will improve reading instruction. Finally, the sixth research question asked if teachers trust that Accelerated Reader technology is perceived as effective in helping to improve reading instruction.

The results found that teachers’ experience, teachers’ peer experience, teachers’ peer support, and gender were all antecedents that had meaningful statistical relationships with disposition to trust. Gender was found to affect only 1% of the overall variance of disposition to trust when all five variables were examined together; however, findings indicated that females had less disposition to trust than males. Multiple age brackets were found to be insignificant.
DEDICATION

I dedicate this dissertation to my family. Without your support, sacrifice and encouragement, none of this work would have been possible.
ACKNOWLEDGEMENTS

I would like to extend my thanks to everyone who has supported me through my doctoral program. I am appreciative to my dissertation committee for being a source of knowledge and support. Specifically, I would like to thank Dr. Anthony Olinzock for his extensive insights into interpreting statistical outcomes. I would like to thank Dr. Connie Forde for her advice on formatting and style. I would like to thank Dr. James “Ed” Davis for joining my committee, reading my dissertation at a busy time of the semester, and allowing me to defend my dissertation on schedule. A very special acknowledgment and thanks goes to Dr. Mabel CPO Okojie for chairing my dissertation. Thank you for sharing your expertise on research design, guiding my development as a scholar, enhancing my research skills, and encouraging me along the way.

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I would like to thank my husband, Xiaojun, my two children, Christopher and Caitlyn, and my mother, Colleen, whose love, support, and sacrifice have been remarkable throughout this journey. I would also like to thank my entire extended family
who have offered unending support. I owe a great deal to all of you, for you have all had a hand in turning this dream into a reality.

Finally, I would like to thank the school systems who supported this research study by allowing me to survey their employees. I would also like to thank the hundreds of teachers who participated in this study. As a parent, I have become familiar with the Accelerated Reader program, but it was not until I heard the teachers’ insights that this topic really came to life.
TABLE OF CONTENTS

DEDICATION ........................................................................................................................................ ii
ACKNOWLEDGEMENTS ...................................................................................................................... iii
LIST OF TABLES ................................................................................................................................... viii
LIST OF FIGURES ............................................................................................................................... x

CHAPTER

I. INTRODUCTION ............................................................................................................................. 1
   Background ........................................................................................................................................... 2
   Statement of the Problem ...................................................................................................................... 6
   Purpose of the Study ............................................................................................................................ 7
   Research Questions ............................................................................................................................. 8
   Delimitations and Limitations ............................................................................................................ 11
   Definition of Terms ............................................................................................................................ 11
   Organization of the Study ................................................................................................................... 13

II. LITERATURE REVIEW ...................................................................................................................... 14
   Accelerated Reader ............................................................................................................................ 15
   Trust ................................................................................................................................................... 17
      Defining Trust ................................................................................................................................. 18
      Trust Review ................................................................................................................................ 19
      Trust Models ................................................................................................................................ 20
   Disposition to Trust ........................................................................................................................... 27
   Teaching Experience ......................................................................................................................... 29
   Peer Experience ................................................................................................................................. 30
   Peer Support ................................................................................................................................... 31
   Gender ............................................................................................................................................... 33
   Age .................................................................................................................................................... 34

III. RESEARCH METHODOLOGY ....................................................................................................... 36
   Introduction ....................................................................................................................................... 36
   Research Design ............................................................................................................................... 36
   Study Population ............................................................................................................................... 37
IV. RESULTS AND DISCUSSION ................................................................................. 47

Results of Data Collection Findings ................................................................ 47
Descriptive Data for Participants ...................................................................... 48
  Gender of participants ....................................................................................... 48
  Age of participants ............................................................................................ 49
  Teaching experience ........................................................................................... 50
  Computer experience ......................................................................................... 51
  Accelerated Reader experience ......................................................................... 52
  Education ........................................................................................................... 53
  Ethnicity ............................................................................................................. 54
Descriptive Statistics for Each Variable ................................................................. 54
  Teacher experience ............................................................................................ 55
  Peer experience .................................................................................................. 58
  Peer support ...................................................................................................... 61
  Disposition to trust ........................................................................................... 64
Research Findings .................................................................................................. 66
  Research Question 1 ........................................................................................ 67
  Research Question 2 ........................................................................................ 72
  Research Question 3 ........................................................................................ 78
  Research Question 4 ........................................................................................ 84
  Research Question 5 ........................................................................................ 85
  Research Question 6 ........................................................................................ 86

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .................................. 89

Introduction ........................................................................................................... 89
Summary of Findings ............................................................................................ 89
Conclusions ............................................................................................................ 96
Recommendations .................................................................................................. 97
  Recommendations for Further Research ......................................................... 97
  Implications for Practice ....................................................................................... 98

REFERENCES .......................................................................................................... 99
APPENDIX

A.  IRB APPROVAL.....................................................................................................................112

B.  RECRUITING MATERIALS ....................................................................................................114

C.  SURVEY INSTRUMENT...........................................................................................................117
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cronbach’s Alpha Scale of Internal Consistency</td>
<td>38</td>
</tr>
<tr>
<td>2</td>
<td>Frequency and Percentage of Gender</td>
<td>48</td>
</tr>
<tr>
<td>3</td>
<td>Frequency and Percentage of Age</td>
<td>49</td>
</tr>
<tr>
<td>4</td>
<td>Frequency and Percentage of Teaching Experience</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>Frequency and Percentage of Computer Experience</td>
<td>51</td>
</tr>
<tr>
<td>6</td>
<td>Frequency and Percentage of Accelerated Reader Experience</td>
<td>52</td>
</tr>
<tr>
<td>7</td>
<td>Frequency and Percentage of Education Level</td>
<td>53</td>
</tr>
<tr>
<td>8</td>
<td>Frequency and Percentages of Ethnicity</td>
<td>54</td>
</tr>
<tr>
<td>9</td>
<td>Ratings of Teacher Experience Descriptive Statistics</td>
<td>56</td>
</tr>
<tr>
<td>10</td>
<td>Mean, Standard Deviation for Teacher Experience</td>
<td>57</td>
</tr>
<tr>
<td>11</td>
<td>Ratings of Peer Experience Descriptive Statistics</td>
<td>59</td>
</tr>
<tr>
<td>12</td>
<td>Mean, Standard Deviation for Peer Experience</td>
<td>60</td>
</tr>
<tr>
<td>13</td>
<td>Ratings of Peer Support Descriptive Statistics</td>
<td>62</td>
</tr>
<tr>
<td>14</td>
<td>Mean, Standard Deviation for Peer Support</td>
<td>63</td>
</tr>
<tr>
<td>15</td>
<td>Ratings of Disposition to Trust Descriptive Statistics</td>
<td>65</td>
</tr>
<tr>
<td>16</td>
<td>Mean, Standard Deviation for Disposition to Trust</td>
<td>66</td>
</tr>
<tr>
<td>17</td>
<td>Spearman Rho Results for Teacher Experience and Disposition to Trust</td>
<td>69</td>
</tr>
<tr>
<td>18</td>
<td>Simple Linear Regression: Teacher Experience Predicting Disposition to Trust</td>
<td>72</td>
</tr>
<tr>
<td>19</td>
<td>Spearman Rho Results for Peer Experience and Disposition to Trust</td>
<td>75</td>
</tr>
</tbody>
</table>

viii
20 Simple Linear Regression: Peer Experience Predicting Disposition to Trust .................................................................78
21 Spearman Rho Results for Peer Support and Disposition to Trust .................80
22 Simple Linear Regression: Peer Support Predicting Disposition to Trust .................................................................83
23 Simple Linear Regression: Gender Predicting Disposition to Trust .............85
24 Multiple Regression Results for Age ..............................................................86
25 Multiple Regression: Characteristics Predicting Disposition to Trust ..........88
### LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E-voter trust model</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Web-trust model</td>
<td>26</td>
</tr>
</tbody>
</table>
INTRODUCTION

As more jobs are sent offshore, the American education system must produce graduates that can compete in the global market. Children spend thirteen years in the K-12 educational system and must prepare for college or to enter the workforce during that time. Moreover, America must place education as a top priority to be able to compete globally (National Institute of Child Health and Human Development, 2000). School districts are charged with the task to ensure that students are competent in the traditional subjects, such as mathematics, language arts, social studies and science, regardless of the economic conditions, available resources, or quality of teachers. One district may have limited technology available to students, while another may have overcrowded classrooms. Each district has its own challenges. Consequently, school districts must be resourceful and enable learning under all circumstances.

One such enabler is utilizing technology as a means of assessment. The following scene, witnessed by Campbell at an elementary school, depicts a classroom that utilizes technology to diagnose individual student weaknesses through reading assessment.

Caitlyn is a seven-year old girl in the second grade. After reading her library book, she is ready to take an accelerated reader test. So, during reading hour, she logs onto the computer, opens the Accelerated Reader program, enters the library book code, and completes ten multiple choice questions. Once she completes the
test, she sees her grade and Accelerated Reader average. Caitlyn’s teacher is able to print out a diagnostic for the entire class, or for an individual student. The teacher does not have to grade or prepare quizzes or calculate averages. Because the teacher trusts the outcomes of the program, she is able to utilize information provided about individual reading levels; thus, the teacher is able to set individual goals (N. Campbell, personal communication, January 4, 2009).

Because Caitlyn attends a city school, the classes are often overcrowded, and the teachers need a program such as the Accelerated Reader program to reduce the burden on the teacher. As teacher responsibility increases, programs of this nature will become more and more valuable. Teachers must trust the outcomes of the assessment to realize the value; hence, an understanding of the definition of trust, its constructs, and the Accelerated Reader program is essential (Sekhon, Ennew, Kharouf, & Devlin, 2014).

**Background**

According to Mayer and Davis (1999), trust is the product of a set of trustworthiness beliefs about the following characteristics of the trusted party: ability, integrity, and benevolence. Ability refers to the skills and competence that a party possesses, integrity refers to the degree which a party adheres to accepted rules of conduct such as honesty and keeping promises, and benevolence refers to a party’s desire to do good to the customer. Trust, in the form of e-trust, is studied in the context of e-learning, e-commerce, e-government, e-voting, web health portals, etc. Through asynchronous learning, assessment software is an effective means of teaching and learning, not only at the post-secondary level, but at all levels of learning (Wu, Kno, & Wang, 2017). This software is particularly effective when classes are large and teachers
are unable to interact with individual students. This type of online instruction allows interaction to develop between the student and the instructor, among members of the class, and between learners and the software (Hiltz & Turoff, 2002). As an increasingly popular means of delivery, the number of school systems that offer online instruction is growing quickly (Jarvenpaa, Shaw, & Staples, 2004). Thus, the need exists to investigate the trust that teachers place in the outcomes of assessment provided through technology as well as the antecedents to the dispositional trust.

Gefen (2002a) compiles several definitions of the word trust. According to Mayer, Davis, and Schoorman (1995), trust is “the willingness to be vulnerable to the actions of another person or people” (p. 712). Rotter (1971) explains that trust is “an expectation held by an individual or a group that the word, promise, verbal, or written statement of another individual or group can replied on” (p. 444).

Wang and Emurian (2005) explain that when trust is demonstrated, there are four characteristics displayed: trustor and trustee, vulnerability, produced action, and subjective matter. There must be two parties in any trusting relationship: a trusting party and a party to be trusted. The development of trust is based on the ability of the trustee to act in the best interest of the trustor and the degree of trust that the trustor places on the trustee. Trust is only needed in an environment that is uncertain and risky. Trustors must be willing to make themselves vulnerable for trust to be operational by taking the risk of losing something important to them and relying on the trustees not to exploit the vulnerability (Fairley, Sanfey, Vyrastekova, & Weitzel, 2016). Trust leads to actions, mostly risk taking behaviors. The form depends on the situation; the action may concern something tangible or intangible. For example, a person lends money to a friend because
he is trusted to pay it back. Trust is directly related to and affected by individual differences and situational factors. Different people view the role of trust differently in different scenarios and have different magnitudes of trust towards different trustees (Wang & Emurian, 2005). People’s trust in various technologies have similar characteristics.

Technical competence reflects the ability of a person to utilize technology. Indeed, the trustor increases trust in the trustee based on the perception of the trustee’s technical competence (Mosier & Skitka, 1996). Perceived technical competence may vary depending on whether a task is routine or unusual. Disposition to trust is a general propensity to trust others which can also influence an individual’s beliefs and intentions towards technology. McKnight, Choudhury, and Kacmar (2002), and Gefen, Rose, Warkentin, and Pavlou (2005) both find that a person’s disposition to trust is related to the trust that the person has in using a particular technology. Warkentin, Gefen, Pavlou, and Gregory (2002) and McKnight et al. (2002) find that institution-based trust is related to a person’s trusting beliefs. Gefen et al. (2005) includes socio-cultural similarities as an influencing factor on trust and perceived usefulness of a particular technology.

Clements and Pawlowski (2012) examine how teachers make decisions to use open educational resources and the role in which trust plays in their decisions and actions. One area of importance that is identified in terms of trust was trust in technologies. Often teachers have to make decisions to use a technology without prior experience using the technology. In such circumstances, they have to use trust as a decision making instrument (Josang, Ismail, & Boyd, 2017). Since these decisions can have extreme importance on the processes and outcomes of providing quality education
to students, teachers are often hesitant to trust that a technology will meet their needs (Xiong & Liu, 2004). An area that teachers look to determine if they should trust a particular technology is reputation in the form of reviews and evaluations that are performed by peers (Clements & Pawlowski, 2012).

Because of these more modern trust models, it is possible to theorize that trust is an important variable between an automated system and its use. It is important to note that people may or may not use a system based on trust. Trust can be driven by their experience using the system. Beyond the aforementioned work, limited research has been done on the concept of trust. Furthermore, the majority of the work that has been done is theory and knowledge building while not substantiating the literature with empirical studies.

One particular technology that teachers are often required to use in the classroom is the Accelerated Reader program. Accelerated Reader is a powerful tool for monitoring and managing independent reading practice. The Accelerated Reader program is a computerized information system that provides students and teachers with immediate diagnostic feedback on student reading practice through short quizzes (Topping, 2015). Accelerated Reader is not the only computerized reading program on the market, however it is the most popular reading software in the Pre-K through 12th grade settings. It aims to improve students’ reading skills through reading practice and by providing frequent feedback on students’ progress to teachers. Accelerated Reader allows students choose the best word to complete a sentence, and the software instantly delivers the next question. Students complete their tests, and authorized personnel can access confidential
testing results and powerful reports that diagnose reading ability and suggest courses of improvement.

According to the U.S. Department of Education (2008), the Accelerated Reader program is accepted as an effective program with positive effects on reading comprehension and general reading achievement. However, there are still negative aspects of the program.

One of the main problems with the Accelerated Reader program is with the variation in its implementation (Groce & Groce, 2005). Often teachers do not implement the program in the way that it is designed to be implemented, and thus the program is not as effective (Biggers, 2001).

The Accelerated Reader program is designed to be used as a supplementary program and is not meant to substitute reading instruction. While the strength of the program lies in its ability to offer individualized supplementary plans of instruction (Biggers, 2001), far too often, the Accelerated Reader program is utilized as a stand-alone program with no additional reading instruction. When schools use the Accelerated Reader program as the principal foundation of reading instruction, the program is less likely to be successful (Topping, 2015).

**Statement of the Problem**

The problem is a compound one. As class sizes increase, the responsibilities of the elementary school teachers also increase. In addition, teachers are asked to integrate new skills into their classrooms. Elementary teachers are held accountable for their ability to provide their students with knowledge and skill. To prepare students to compete in global markets, teachers must utilize technologies, such as Accelerated
Reader, as enablers to providing quality educations (Li & Choi, 2013). As higher demands are placed on the elementary teachers, they must trust the technology to assist in the education process. In order for teachers to effectively implement electronic learning tools, such as Accelerated Reader, in their classrooms, teachers must trust that the learning tool provides accurate assessments of student learning. Without a fundamental trust in the technology, the technology integration within the classroom is destined for failure (Li, 2010). In order for teachers to address varying paces of student learning, teachers need to trust that the technologies such as Accelerated Reader will facilitate instruction function effectively so that they can address individual differences in learning among students.

**Purpose of the Study**

The purpose of this study is to investigate the relationships among teachers’ disposition to trust Accelerated Reader and the following antecedents to disposition to trust: teachers’ experiences with Accelerated Reader, teachers’ peer experiences with Accelerated Reader, teachers’ peer support with Accelerated Reader, teachers’ gender and teachers’ age. As class size increases there is more demand to automate some of the teaching tasks (Berggren, Fili, & Nordberg, 2015). To meet the needs of the schools, there is an increased demand for electronic teaching tools, such as Accelerated Reader (Crawford, Higgins, Huscroft-D’Angelo, & Hall, 2016). Because technology adoption in the classroom heavily relies upon the adoption behaviors of teachers, it is necessary to understand teachers’ perspectives in order to understand their disposition to trust a particular technology (Tarhini, Elyas, Akour, & Al-Salti, 2016). Consequently, it is imperative that not only the software be examined, but also trust levels of teachers.
Focusing on teacher perception and disposition to trust electronic teaching tools, such as Accelerated Reader, allows school districts to ascertain if these available resources are beneficial to their classrooms. If teachers intrinsically trust the electronic teaching tools implemented within their classrooms, then the technology should have a higher success rate on improved learning (Gefen, Karahanna, & Straub, 2003).

While there are numerous studies on trust (Mayer et al., 1995; Rotter, 1971; Wang & Emurian, 2005) and trust using various technologies (Gefen, 2000; Gefen, 2002c; McKnight et al., 2002), there are fewer studies examining teachers’ trust in technology (Clements & Pawlowski, 2012). There are also numerous studies on the effectiveness of the Accelerated Reader program (Foster & Foster, 2014; Nunnery, Ross, & McDonald, 2006); however, research shows that there are conflicting results as to the effectiveness of the program (Biggers, 2001; Topping, 2015). Regardless, many studies show that if used as a reading supplement, the Accelerated Reader program does help promote growth in reading achievement. One area that is missing from these areas of research is teachers’ trust of the Accelerated Reader program. This study expands existing literature concerning teachers’ disposition to trust the Accelerated Reader program.

**Research Questions**

This dissertation aims at developing a predictive model for teachers’ disposition to trust the Accelerated Reader program. Five constructs are identified for inclusion. The independent constructs identified as predictors of disposition to trust are teacher experience with Accelerated Reader, peer experience with Accelerated Reader, peer support with Accelerated Reader, gender, and age. Finally, all the variables in the model are used to determine whether teachers’ trust Accelerated Reader. In the pursuit of these
goals, six key research questions are posed. The research questions for this study are as follows:

Research Question 1: Does a statistically significant relationship exist between teachers’ experience in using electronic education tools and their disposition to trust Accelerated Reader technology to facilitate reading instruction?

When a person has mastered the use of a technology, the experience influences a person’s perspective on his or her ability to trust that technology. Successful experiences lead to positive feelings and a greater disposition to trust. A teacher with extensive positive experience using Accelerated Reader would have the necessary experience to have a positive disposition to trust an electronic learning tool.

Research Question 2: Does a statistically significant relationship exists between teachers’ peer experience and their disposition to trust Accelerated Reader software technology to improve reading instruction?

Observing a peer, or colleague, perform a task or handle a situation can help a person to perform the same task by imitation. Additionally, having a peer that has a positive experience using technology can help a person increase his or her disposition to trust that technology. Observing peers, or colleagues, succeed will increase a teacher’s beliefs in a technology such as Accelerated Reader.

Research Question 3: Does a statistically significant relationship exist between teachers’ peer support and their disposition to trust that Accelerated Reader software technology improves reading instruction?

Peer support occurs when a person’s peers provide familiarity and practical help to each other. Peer support can be formal such as trained mentoring or informal. Peer
support using technology such as Accelerated Reader should increase disposition to trust Accelerated Reader.

Research Question 4: Does a statistically significant relationship exist between teachers’ gender and their disposition to trust that the Accelerated Reader technology will improve reading instruction?

Past trust literature demonstrates that men exhibit greater trust than women do while women show higher levels of reciprocity (Dittrich, 2015). Also trusting behavior is driven strongly by expectations of reciprocation. Because of this prior research gender should have an effect on disposition to trust Accelerated Reader.

Research Question 5: Does a relationship exist between teachers’ age and their disposition to trust that the Accelerated Reader technology will improve reading instruction?

Research shows that age is a construct that has been found to predict behavior (Ajzen, 1991), and research continues to show that it is a predictor in specific areas such as technology acceptance (Venkatesh & Davis, 2000). Applied to technology or using technology such as Accelerated Reader, disposition to trust in technology could be affected by age.

Research Question 6: Do teachers trust that Accelerated Reader technology is perceived as effective in helping students in improving reading instruction?

McKnight et al. (2002) and Gefen et al. (2005) both find that a person’s disposition to trust is directly related to the trust that the person has in using a particular technology. Together, a teacher’s experience using Accelerated Reader, peer’s experience using Accelerated Reader, peers’ support while using Accelerated Reader, age, and
gender will determine whether a teacher trusts that Accelerated Reader is effective in helping students in improving reading instruction. Together, all five variables, or antecedents, are used to develop a model that explains the variances in disposition to trust.

**Delimitations and Limitations**

As with any research study, limitations and delimitations must be considered in this study of elementary teachers in a southern state. They are as follows:

1. The honesty of the respondents in answering the self-reported questionnaire is assumed.
2. The research participants were limited to teachers in grades two through six in four districts of one region that used Accelerated Reader.
3. Generalization of the results is limited to this unique population of the study.
4. Only reading programs are available for data collection; therefore, results are not generalized to other subject areas such as science, social studies, and math.
5. The study is limited to a time frame of the 2009-2010 academic year.
6. Constructs measured show signs of collinearity.
7. The age construct is not measured in equal intervals.

**Definition of Terms**

To provide clarity and avoid misconceptions, the following terms are defined as they are used in the study. Terms that are technical in nature, subject to multiple interpretations, or unique to this study are defined as follows:
*Accelerated Reader* refers to a supplemental reading program created for students in Grades K-12 that provides computerized instruction intended to improve student reading skills (U.S. Department of Education, 2016).

*Antecedent* refers to a preceding event, condition, or cause (Merriam-Webster, n.d.).

*Electronic education tool* refers to an electronic tool that enables education, such as interactive computer software.

*Experience-based trust* refers to the trust that develops over time with the gain of more experience (Holmes, 1991).

*Disposition* refers to the tendency of something to act in a certain manner under given circumstances (Merriam-Webster, n.d.).

*Disposition to trust* refers to a general inclination to display faith in humanity and to adopt a trusting stance toward others (McKnight, Cummings, & Chervany, 1998).

*Peer* refers to one that is of equal standing with another. As pertaining to this study, a teacher’s peer is another teacher employed at the same institution teaching the same classes (Merriam-Webster, n. d.)

*Peer experience* includes the experiences with electronic learning tools attained by a teacher’s peers.

*Peer support* refers to the encouragement or assistance with electronic learning tools as provided by a teacher’s peers.

*Teacher* refers to a state or national certified teacher employed to instruct a particular classroom at a school in one of the selected schools.
Teacher experience includes the experiences with electronic learnings attained by a teacher.

Trust refers to “the willingness to be vulnerable to the actions of another person or people” (Mayer et al., 1995).

Organization of the Study

This study is organized as five chapters with additional appendices. Chapter I provides a general overview to trust and also gives the purpose of this study.

Chapter II provides a review of literature relevant to this study as well as the research questions to be investigated. It includes a thorough review of the use of Accelerated Reader, disposition to trust, teaching experience using electronic education tools, age, gender, peer experience, and peer support.

Chapter III describes the research methodology that was conducted for this research. The research design and model, population are discussed. The instrumentation including the reliability and validity of the research are presented. Second, the procedures employed in the study are depicted. Third, the data analysis techniques used to test the developed research questions are discussed.

Chapter IV discusses the data analysis conducted for this research. The results of statistical testing as well as research findings are presented.

Chapter V summarizes this study. The chapter includes a discussion of findings and conclusions. The dissertation chapter concludes with recommendations to consider in future research and implications for practice.
CHAPTER II
LITERATURE REVIEW

The purpose of the literature review is to review the existing research which supports the developed theoretical model. Chapter II provides a theoretical foundation for this study. In this chapter, the relevant research literature is divided into nine sections including: an overview of the Accelerated Reader program, an overview of trust, an overview of relevant trust models, disposition to trust, experience with electronic education tools, peer experience with electronic education tools, peer support, gender, and age.

This chapter builds the theory for the relationship among disposition to trust among other variables by first framing the concept of disposition to trust within the perspective of experience with educational learning tools, peer experience, peer support, gender and age. By examining disposition to trust from this perspective, it provides the contextual focus needed for a meaningful examination of the disposition to trust construct.

The relationship between disposition to trust, experience with an IT artifact, peer experience, peer support, and job experience as investigated in this study, emerges from a review of the trust literature viewed through the lens of electronic learning tools as enablers of individualized learning. Trust research is rich in theoretical perspectives, such as economics, education, information systems, management, psychology, and sociology.
An examination of trust literature within the context of technology suggests that disposition to trust is interrelated and complimentary with numerous other theories. When disposition to trust is viewed through the lens of electronic educational tools, such as Accelerated Reader, a theoretical model emerges which suggests peer experience, peer support, gender and age may be dominate factors that apply to the disposition to trust. This is a relationship that has not yet been previously established or investigated.

The present investigation is informed by the framework that disposition to trust is influenced by multiple constructs. It is further examined by the following lines of related literature: an overview of trust, an overview of relevant trust models, disposition to trust, age, gender, experience with electronic education tools, peer experience with electronic education tools, and peer support.

**Accelerated Reader**

One of the most widely used supplementary reading programs is the Accelerated Reader program (Topping 2015; U.S. Department of Education, 2016). Developed by Renaissance Learning in 1982, the Accelerated Reader program has been implemented in more than 75,000 North American schools. The Accelerated Reader program is used to supplement reading curriculum by allowing teachers to individualize instruction for every student. Primary goals of the program are to accelerate reading, motivate individual student success, individualize instruction, improve standardized test scores, and promote effective classroom management. Throughout the world, this program has been credited with helping students achieve improved reading scores and building a life-long love of reading (Pavonetti, Brimmer, & Cipielewski, 2002).
The Accelerated Reader program is a supplemental reading program created for students in Grades K-12. It provides computerized instruction intended to improve student reading skills. One characteristic of the program that has made it so popular is its ability to provide teachers and students with immediate feedback on student reading progress (U.S. Department of Education, 2016).

The first step in using the Accelerated Reader program is the Standardized Test for the Assessment of Reading (STAR). The STAR Reading test assesses student reading abilities and establishes individual courses of improvement. Students receive grade equivalency scores comparing their performance with other students in the sample (Pavonetti et al., 2002). Those grade equivalency scores are used to establish zones of proximal development (ZPD) for each student. When students work within their zones, they are able to maximize their reading development (Paul, 1996).

Once students have completed the STAR Reading test, they select books based on their interests and ZDP reading levels. In the Accelerated Reader program, the student is directed to read within the established range. The program has over 150,000 book titles with associated Accelerated Reader quizzes to choose from. Accelerated Reader books are labeled by reading levels and point values. After students finish reading books, they use the Accelerated Reader program to take quizzes based on the books’ content and vocabulary. Students are awarded points based on the number of correct answers they have on the quiz. Results from the quiz give teachers guidance on how to provide additional reading assistance. As students’ reading achievement progresses, they are instructed to read books at higher levels (U.S. Department of Education, 2016).
Trust

In recent years trust has been examined in several disciplines in social sciences. Historically, trust has been viewed as a necessity of social adoption but not typically worthy of further empirical study (Costigan, Ilter, & Berman, 1998). In 1988, Gambetta made the following statement:

In the social sciences, the importance of trust is often acknowledged but seldom examined, and scholars tend to mention it in passing, to allude to it as a fundamental ingredient or lubricant, an unavoidable dimension of social interaction, only to move on to deal with less intractable matters. (p. viii)

The modern examination of trust has been instigated partially by the ever expanding technology field. Due to the paradigm shift caused by the internet there have been new demands on information across space and time (McEvily & Chakravarthy, 2002). A heavier reliance on information increases the amount of uncertainty, making individuals more dependent upon accurate information (McEvily, Perrone, & Zaheer, 2003).

The resulting body of trust research is typically disjointed and lacking consistency. In the field of psychology the focus on trust is at the individual level. Typically the literature focuses on individual readiness to trust with differences that are rooted in early development (Kramer & Tyler, 1996). From a business perspective Economist’s tend to focus on the organizational unit. For example, economics trust literature is concerned with the cost and benefits of specific behaviors (Granovetter, 1985). The trust literature from a sociology perspective utilizes a group as the unit of
measure, looking at interpersonal transactions that impact personal or group level performance.

**Defining Trust**

While there is no universally accepted definition of trust there are several commonly cited definitions. Gefen (2000a) compiled several definitions of the word trust. According to Mayer et al. (1995), trust is “the willingness to be vulnerable to the actions of another person or people” (p. 721). Rotter (1971) explains that trust is “the expectation held by an individual or a group that the word, promise, verbal, or written statement of another individual or group can be relied on” (p. 444). Finally, Mayer and Davis (1999) define trust as the product of a set of trustworthiness beliefs about the following characteristics of the trusted party: ability, integrity, and benevolence.

Trust then is the belief that another person will do something that needs to be done without being watched. Ability refers to the skills and competence that a party possesses, integrity refers to the degree which a party adheres to accepted rules of conduct such as honesty and keeping promises, and benevolence refers to a party’s desire to do good to the customer. In order to define trust it is imperative to understand that a person, group or organization is at risk of being harmed in some way if the person group or organization fails to do as expected. Mayer and Davis (1999) make the distinction that trust is not taking risk, but the willingness to take risk and it is the element of risk that distinctly differentiates trust from cooperation.

The key then to trust is risk or more specifically vulnerability. For example, if a person’s motives coincide with the trustee’s desires then cooperation can occur without trust. So in effect a person can cooperate with someone else that they do not trust.
Therefore trust is not a behavior such as cooperation, but a condition that can result from action.

Additionally in order for trust to be present there must be a choice involved. The trustor must be free to choose to depend on the trustee. Conversely the trustee must be free to act in a way that could benefit or harm the trustor.

Gefen (2002b) explains that the same three rules described by Mayer and Davis (1999), ability, benevolence, and integrity, should apply to trust. Two outcomes of trust are specific to technology trust though. The first outcome is a willingness to utilize a software system. The second outcome is a willingness to implement the recommended remedy by the software system.

**Trust Review**

Trust is a psychological choice for the trustor to trust the trustee. Trust is not a behavior (Luhmann, 1979). From this perspective trust is not permanent, and can vary according to different applicable situations (Luhmann, 1988).

Trust requires a decision making component that occurs in response to the presence of vulnerability. The decision involves several components and is based on the perceived trustworthiness of the trustee. Once the decision to trust has been made the output of the process is a decision to engage in a situation where there is vulnerability. The outcome of the choice produced by the decision is evaluated. This evaluation is over the perceived ability, integrity, and benevolence of the trusted party. As the cycle repeats over time, the amount trust continues to either build or wane until it reaches a point of stability.
Trust Models

The very first trust research in social science focused merely on trust between humans. Recent work pertaining to trust in technology has extended the early work of trust in humans (Muir, 1987). For example, some early trust models show that trust is dependent on current and prior levels of system performance, the presence of faults and prior levels of trust. Zuboff (1988) reports similar findings. More recently, however, trust models have tried to explain the role trust plays in system performance for a wide range of automated systems, such as online shopping (McKnight et al., 2002), e-government (Warkentin et al., 2002), automated healthcare, air traffic control (Masalonis & Parasurman, 1999), and antiaircraft warfare (Jian, Bisantz, & Drury, 2000).

Because of these more modern trust models it is possible to theorize that trust is an important variable between an automated system and its use. It is important to note that people may or may not use a system based on trust. Trust can be driven by their experience using the system. Beyond the aforementioned work, limited research has been done on the concept of trust. Furthermore, the majority of the work that has been done is theory and knowledge building while not substantiating the literature with empirical studies.

Barber (1983) created a taxonomy of trust that included persistence, technical competence, and fiduciary responsibility. Persistence, according to Barber (1983), is the underpinning foundation for trust. Persistence allows the trustors to form their expectation that something will in fact work in an expected way. Because of the principle of persistence the complexity of the task is diminished by limiting the possible
outcomes. Without persistence a trustor would have to consider every possible positive and negative outcome at each step of the process.

Technical competence reflects the ability of a person to utilize technology. Indeed, the trustor will increase trust in the trustee based on the perception of the trustee’s technical competence (Mosier & Skitka, 1996). Perceived technical competence may vary depending on whether a task is routine or unusual. For instance, a trustor may place trust in a trustee for a routine task, but have a different level of trust for a more complex task. Another dimension of trust in Barber’s (1983) model is trustee responsibility. Trustee responsibility refers to moral and social obligations that people have to hold the interest of the organization or the group above their own (Uggirala, Gramopadhye, Melloy, & Toler, 2004).

Another three-stage trust model was introduced by Rempel, Holmes, and Zanna (1985). The Rempel model is based on a hierarchical model of trust, and contends that certain factors of trust may change with time and emotional investment. In this model the first stage of trust is predictability. Predictability is when the trustee does what the trustor is expecting (Uggirala et al., 2004). The more a trustee’s performance varies the lower their predictability. As the relationship progresses an operator may enter the second stage of trust: dependability. Dependability is an understanding of the requirements (Rempel et al., 1985).

The final piece of this model is that of faith, in faith a trustor summarizes past predictability and dependability experiences to summarize them into a belief in how the trustee will operate in unknown future situations. In order to develop faith in any
particular trustee, a trustor must have extensive experience with the trustee to let faith
develop (Rempel et al., 1985).

Both Barber (1983) and Rempel et al. (1985) have key points. Barber’s model
provides a contextual pinpoint and wealth of significance needed to characterize many
interactions in technology based systems. In addition, Rempel and colleagues provide the
vibrant aspects needed to predict how trust may change as a result of experience with the
system and trustee. In 1994, Muir combined these two models to develop a
comprehensive model of trust in technology that is comprised of six components:
predictability, dependability, faith, competence, responsibility, and reliability. The largest
benefit of the Muir model is it was empirically prove that subjective trust ratings, along
these constructs, from an operator could be used to measure user trust in a system (Muir,
1994).

When trust is demonstrated, Wang and Emurian (2005) explain that there are four
caracteristics displayed: trustor and trustee, vulnerability, produced action, and
subjective matter. There must be two parties in any trusting relationship: a trusting party
and a party to be trusted. The development of trust is based on the ability of the trustee to
act in the best interest of the trustor and the degree of trust that the trustor places on the
trustee.

Trust is only needed in an environment that is uncertain and risky. Trustors must
be willing to make themselves vulnerable for trust to be operational by taking the risk of
losing something important to them and relying on the trustees not to exploit the
vulnerability. Consumers are often uncertain about risks. Data are automatically collected
and misused or distributed and the consumer is vulnerable to loss of money and loss of
privacy. The form depends on the situation; the action may concern something tangible or intangible. For example, a person lends money to a friend because he is trusted to pay it back. Trust is directly related to and affected by individual differences and situational factors. Different people view the role of trust differently in different scenarios and have different magnitudes of trust towards different trustees (Wang & Emurian, 2005).

People’s trust in various technologies has similar characteristics.

Warkentin et al. (2002) examine trust in the use of e-government. In contrast to traditional government processes, e-government is found to have the following characteristics: extensive use of communication technology; impersonal nature of online environment; ease by which information can be collected, processed, and used; implicit uncertainty of using an open technological infrastructure for transactions; and newness of communication medium.

E-government processes are all performed over the Internet; therefore, people often feel that the processes are impersonal, because there is no person from which to ask questions. Some people have more experience using computers and view the processes involved with e-government as conveniences, while those who are less comfortable using computers view the processes involved with e-government as inconveniences. With the security problems involved with computer use, people are often uncomfortable providing personal information over the Internet. Finally, some people have tendencies to be late adopters of new technologies, because they do not trust the technology to work effectively (Warkentin et al., 2002).

When comparing e-government to e-commerce, there are many differences that affect the rate of adoption and people’s ability to trust the process. In contrast to e-
commerce, e-government is often mandatory. When a government process is mandatory, whether it is convenient or inconvenient, people trust the process enough to adopt. Also, when the processes are mandatory, government agencies are required to share information with the user so that they can complete the processes. Because governments are political entities, people have greater tendencies to trust that the processes are effective and possess a trust that is institution-based. The government is viewed as a third-party guarantor, stamping its seal of approval on the processes involved with e-government. Characteristic-based trust deals with social similarity issues such as gender, kin, and nationality. Members of the same parties are thought to have the same set of expectations. Therefore, when an e-government process is being utilized, people believe that everyone is expected to perform the same set of tasks. Process-based trust is based on prior experience. Once a person gains familiarity with a task and sees that the process is effective, that person trusts that the process will work again (Warkentin et al., 2002).

In the 2005 study by Gefen et al., potential e-voters were compared in the U.S. and South Africa. The authors stated that to trust means “to have expectations about others’ (the trustees’) socially acceptable behavior” (Gefen et al., 2005, p. 55). Trust is an essential ingredient in IT adoption where IT is a medium connecting the user (consumer or citizen) to other organizations or agencies. Gefen et al. (2005) formed five hypotheses in the study:

H1: Trust in the agency administering the e-voting process will increase citizens’ assessment of the perceived usefulness of the IT supporting it. (p. 61)
H2: Increased e-voter perceptions of shard values with the e-voting agency personnel will result in increased assessment of the perceived usefulness of the IT. (p. 62)

H3: Increased e-voter perceptions of sociocultural similarity with the e-voting agency personnel will result in increased e-voter trust in the agency. (p. 62)

H4: The effect of sociocultural similarity on Trust (H3) will be stronger in the Republic of South Africa (RSA). (p. 62)

H5: The effect of trust in the agency on perceived usefulness of e-voting (H1) will be stronger in the USA. (p. 65)

Figure 1. E-voter trust model.

Figure 1 depicts the model which forms the basis for the hypotheses that were tested. The first element in the model, propensity to trust, leads to the trust which one possesses. In the study performed by Gefen et al. (2005), propensity to trust is confirmed among rural blacks in the RSA as well as in the U.S. The first and fifth hypotheses were related to a person’s trust leading to a technology’s perceived usefulness. The second hypothesis is related to how a person’s socio-cultural similarity is related to the perceived usefulness of a technology. Finally, the third and fourth hypotheses are related to socio-cultural similarities are related to trust.

![Diagram of the Web-trust model.](image)


As with the two previous studies, McKnight et al. (2002) explains that trust plays a central role in helping consumers overcome perceptions of risk and insecurity. Trust allows consumers to be comfortable sharing personal information, making purchases, and
acting on Web vendor advice. These behaviors are essential to the widespread adoption of e-commerce.

Figure 2 shows the trust model which McKnight et al. (2002) proposed. The model includes four high-level constructs:

- Disposition to trust
- Institution-based trust
- Trusting beliefs
- Trusting intentions

Disposition to trust is a general propensity to trust others, which can also influence an individual’s beliefs and intentions towards a web-based vendor. Institution-based trust is the belief that needed structural conditions are present to enhance the probability of achieving a successful outcome in an endeavor like e-commerce. Trusting beliefs are the confident trustor perceptions that the trustee has attributes that are beneficial to the trustor. Trusting intentions occur when the trustor is securely willing to depend or intends to depend on the trustee. Trust-related behaviors result when trusting beliefs lead to trusting intentions.

**Disposition to Trust**

McKnight et al. (2002) and Gefen et al. (2005) both find that a person’s disposition to trust is directly related to the trust that the person has in using a particular technology. Warkentin et al. (2002) and McKnight et al. (2002) both found that institution-based trust was related to a person’s trusting beliefs. Gefen et al. (2005) included socio-cultural similarities as an influencing factor on trust and perceived
usefulness of a particular technology. All three authors found that trusting beliefs led to a person’s trusting intentions and ultimately, to a person’s trust related behaviors.

Disposition to trust is not part of the earlier models on trust, and is introduced as a way of assessing the relative importance of familiarity on trust. Disposition to trust is a general inclination to display faith in humanity or technology and to adopt a trusting stance toward others or a technology. The former inclination deals with the belief that people in general are trustworthy; the second deals with the belief that better results will be obtained by giving people credit and trusting them, regardless of whether this trust is justified. This predisposition is not based upon experience with or knowledge of a specific trusted party, but is the result of an experience and socialization. As an antecedent of trust, disposition to trust is most effective in the initial phases of a relationship when the trustor and trustee are still mostly unfamiliar with each other prior to extensive ongoing relationships provide the necessary background information.

Social cognitive theory provides a baseline for understanding, predicting, and changing human behavior. Social cognition identifies human behavior as an interaction of personal factors, behavior, and the environment (Bandura, 1977, 1986).

The relation between the person and a person’s behavior involves the stimulus of a person’s thoughts and actions. The relationship between the person and the environment involves human beliefs and cognitive competencies that are developed and modified by social influences and structures within the environment. The third relationship, between the environment and behavior, involves a person’s behavior determining the aspects of their environment and in turn their behavior is modified by that environment. In summation, social cognitive theory is helpful for understanding and
predicting both individual and group trust behavior and identifying methods in which
trust behavior can be modified or changed.

**Teaching Experience**

Rotter (1967) establishes that an individual’s general level of trust has a temporal factor in that it is based on past experiences with others (e.g., parents, teachers, peers, etc.) that leads an individual to develop their generalized attitude of trust. In other words, the way one reacts in a particular situation is not only determined by that situation but by previous experiences that individual has encountered.

Research has carried these findings over to the technology literature as well. For example, if the trustee, in this case technology, performs according to the trustor’s expectations, trust may be maintained or increased based on these experiences. Conversely, not living up to expectations will lower trust (Prenger, Braakman-Jansen, Pieterse, van der Palen, & Seydel, 2012).

Pritchett and Bisantz (2006) found that when a system does not act according to expectations trust is decreased in the system. That is, as a trustor sees or believes that technology has made an error they develop an expectancy that the technology is unreliable (Lee, Park, & Ahn, 2001). Lee et al. (2001) findings indicate that while most people believe computers and other forms of technology will improve their lives, others view these as dehumanizing and prone to errors. Thus, the trust is based on individual experience. Familiarity is experience with the technology or a similar technology.

Doney and Cannon (1997) argue that trust is created in this process when the trustor's knowledge about the technology allows it to predict the behavior of the technology. In e-commerce, consumer familiarity, for example, corresponds to how well
a consumer comprehends the Web site procedures, including when and how to enter credit card information (Doney, Cannon, & Mullen, 1998; Gefen, 2000c).

Another reason that experience can build trust is that familiarity not only provides a framework for future expectations, but also allows for the creation of concrete ideas of what to expect based on previous interactions. The reason for this is that familiarity gauges the degree that prior experience is understood. In many cases prior experience is the basis of trust. In the case of Amazon.com, for example, people who have experience with Amazon.com have previously bought from the site and, in the process, have noticed that the vendor behaves as promised. The more the trustor’s favorable expectations and experiences were met the more likely their experiences are confirmed, and, accordingly, the more they are inclined to trust the vendor.

**Peer Experience**

While teachers’ own experiences using a technology is critical in developing trust that a product works correctly and provides a desired outcome, their colleagues or peers, may have experiences with a technology that can be used to influence opinions, influence actions, and create conditions for trust to occur. When an opinion is offered, the value placed on the opinion is subject to the importance placed on the person offering the opinion (McKnight et al., 1998). The need for people to draw from their peers’ experiences is established with the theory of subjective norm. Subjective norm refers to an individual's perception of whether people important to the individual think the individual should perform the behavior in question (Fishbein & Ajzen, 1975). Subjective norm has commonly been used as a construct to predict behavior, intent, and acceptance

The theory of reasoned action is a classic model of persuasion that comes from social psychology and uses attitude toward behavior and subjective norm as constructs. The theory explains the effects of attitudes and behaviors on human actions, as well as how pre-existing attitudes and behavioral intentions are used to predict behaviors. An individual's decision to engage in a particular behavior is based on the outcomes the individual expects will come as a result of performing the behavior (Fishbein & Ajzen, 1975).

The technology acceptance model is developed as a model designed to predict acceptance in the field of technology as well as technology use in job-related situations. One predictor included in the model is perceived usefulness, which refers to the amount that a person believes that using a particular technology improves his or her job performance. A second predictor included in the model is perceived ease of use, which refers to the amount a person believes that using a particular technology is free of effort (Davis, 1989). Venkatesh and Davis (2000) extend the technology acceptance model to describe perceived usefulness and intent to use a particular technology to include social constructs as predictors. The constructs that are introduced include subjective norm, voluntariness, and image. Upon testing the model, results are strongly supported (Venkatesh & Davis, 2000).

**Peer Support**

Peer support refers to colleagues supporting each other through knowledge, experience, or practical help (Mead, Hilton, & Curtis, 2001). A long line of research
exists that supports the effectiveness of peer support through social science theories (Festinger, 1954; Lakey & Cohen, 2000; Sarason, Levine, Basham, & Sarason, 1983). Social support theory (Lakey & Cohen, 2000) shows that support that colleagues offer one another can influence personal development and provide buffers against the effects of stress. Support can be offered as instrumental, emotional, and information support (Young, 2006).

Social learning theory combines behavioral and cognitive theories of learning. Learning is a cognitive process that can occur while observing a behavior and the consequences of the behavior. As one can see, social learning theory draws from modeling or learning by observing a behavior. When a colleague or mentor models a behavior or shares information, learning takes place (Bandura & Walters, 1963).

Research shows that managing a classroom can be challenging, particularly for inexperienced teachers (Garrett & Steinberg, 2015; Simonsen & Myers, 2015). One area that has been identified as a deficiency in most schools is adequate training and support in classroom management during initial teacher preparation programs (Chesley & Jordan, 2012; Evertson & Weinstein, 2006). Baker, Gentry, and Larmer (2016) find that many beginning teachers state that they are inadequately prepared by their teacher preparation programs to deal with classroom management. They also credit their mentors and peer coaches with learning to manage their classrooms (Templeton, Willis, & Hendricks, 2016).

When peer support is offered in a workplace, it often given as individualized support, or support that meets the unique needs of an individual (Wong, 2006). In another study, researchers find that peers are able help build the behavior of colleagues by
helping to shape, or reinforce, their behavior through teaching. In many situations, peer support is offered through teaching, modeling and coaching practices (Cooper, Heron, & Heward, 2007).

In a separate study, Woolcock (1998) discusses the theoretical aspects of social capital, which is the good will available to individuals by their peer groups. Social capital usually exists in small communities, and the support among peers within the communities is necessary element. McKnight et al. (1998), extended this research by studying benefits of social capital at the individual level and find that the same principles can be applied. The support that individuals offer one another is critical in developing trusting relationships. When adequate support is given that trusting intentions will be robust (McKnight et al., 1998).

**Gender**

As new technologies that influence education evolve, the way that teachers are teaching and how students are learning is changing. Teachers’ attitudes towards these new technologies have significant impacts in the effective use of such technologies within the teaching and learning process (Groff & Mouza, 2008).

Gender research tends to indicate that men are typically more task oriented than women (Minton & Schneider, 1980) and, thus, goal performing expectancies, which focus on accomplishment, are likely to be especially relevant to men. When studying gender schema the theory suggests that such differences stem from accepted society based gender roles and traditional socialization processes rather than biological gender (Bem, 1981).
In an educational setting, research shows that there is a difference in gender regarding perception and use of technology. Female instructors are more apt to have lower confidence and less experience in using computers as a part of their teaching methods (Markauskaite, 2005; Zhou & Xu, 2007). On the other hand, studies also show that male teachers are prone to find the use of computers in the classroom to more useful and easier to use than their female counterparts (Yuen & Ma, 2002).

According to Li (2016), lack of knowledge and experience in using technology is one of the most common reasons for negative attitudes towards technology with female teachers. However, when female teachers have the opportunity to participate in technology training, their confidence improves (Li, 2016).

Studies have found that male and female teachers have different manners of learning when it comes to technology. Males prefer to learn about a technology first, and then consider how to incorporate the application in teaching. Females, on the other hand, prefer to focus on pedagogy before implementing technology (Campbell & Varnehagen, 2002). As a result, female teachers tend to learn how to use technology from peers, whereas male teachers prefer to learn technology on their own (Zhou & Xu, 2007).

**Age**

Historically, age is a construct that has been found to predict behavior (Ajzen, 1991), and research continues to show that it is a predictor in specific areas such as technology acceptance (Kirchmeyer, 2002; Venkatesh & Davis, 2000). The theory of planned behavior joins the concepts of beliefs and behavior. The theory improves on the model of the theory of reasoned action by including a behavior control variable along with moderating variables voluntariness, gender, and age (Ajzen, 1991). In a follow-up
study, Venkatesh et al., (2003) find the relationship between age and adoption to be greater for older workers in terms of weaker willingness to adopt new IT products. Using the theory of planned behavior, Morris, Venkatesh, and Ackerman (2005) find that age differences in terms of individual adoption sustain the use of technology. Findings include differences in reasons for adoption based on age differences. Younger workers are more strongly influenced by attitude toward using the technology, while older workers are more influenced by subject norm and perceived behavioral control (Morris et al., 2005).

Similarly, Meyer (2011) studies the link between age differences and the adoption of new technologies in the work environment. Data reveals that older workers tend to be less likely to use newer technologies compared to younger employees. Additionally, research finds that workers younger than 60 years use computers more often than workers older than 60 years. Although computers are used by most employees in the technology related fields while at the workplace, computer expertise is not necessarily achieved (Li, 2016).

Since new technologies are constantly being developing and updated, employees need to adapt to the new technologies. Research suggests, however, that as applications become more complex and require advanced skills, the difference in age among workers becomes more apparent. Older workers tend to show a lower learning aptitude when introduced to new technologies, as well as a lower willingness to learn compared to younger workers (Globel & Zwick, 2010). These skills, however, are especially important for the implementation of new technologies or software (Li, 2016).
CHAPTER III
RESEARCH METHODOLOGY

Introduction

The purpose of this study is to investigate the relationships among teachers’ disposition to trust Accelerated Reader and the following antecedents to disposition to trust: teachers’ experiences with Accelerated Reader, teachers’ peer experiences with Accelerated Reader, teachers’ peer support with Accelerated Reader, teachers’ gender and teachers’ age. By uncovering which factors are more apt to play a role in determining disposition to trust in electronic learning, school districts are able to establish the trust necessary to enable individualized learning in the classroom.

This chapter specifies the source of data for answering the research questions and describes the methods used to measure the variables and to perform the data analysis. This chapter includes a detailed description of the research design, the participants, the survey instrument, the procedure for data collection, and the data analysis.

Research Design

This research study is a quantitative descriptive study that uses a survey approach. The study is descriptive because the subjects are surveyed once during the investigation with an aim to establish associations or relationships among variables.
The study examines experience with electronic education tools, peer experience, peer support, teaching experience, age, and gender, and their relationship to disposition to trust accelerated reader.

**Study Population**

The population for this study consists of teachers who use Accelerated Reader software to promote individualized learning in reading. The total number of teachers asked to participate in the survey was 417, and the number of teachers who completed the survey is 301, resulting in a response rate of 72.2%. The participants consist of teachers who use the Accelerated Reader program in four school districts in the state of Louisiana.

The following requirements were met for a teacher to be considered as a viable candidate for this study: employed as a third-sixth grade teacher in one of the districts chosen to participate in the study, teaching in a contained classroom, or teaching a reading course in a departmentalized classroom. Selection of the school districts in this study is based on convenience and accessibility. The teachers chosen for the study have access to the technology required to use the Accelerated Reader program and have been provided with the software for such use.

**Validity and Reliability**

The reliability of a survey instrument is demonstrated when the results are found to be replicable. If a study measures what it claims to measure, then the study has validity. To ensure validity, the appropriate types of validity must be examined.

Since the instrument in this study is designed by the researcher, construct validity had to be established. A panel of experts consisting of 10 teachers who use Accelerated
Reader was asked to examine the survey instrument and make recommendations for adding, deleting, and revising questions. Revisions were made to the survey instrument accordingly. For example, more items were added to each construct, and items were reworded to make them clearer for the participants. The investigator revised the survey instrument accordingly and returned the survey to the expert panel for a final examination. When the panel was satisfied that the survey was ready, a pilot survey was administered to 25 teachers. Cronbach’s alpha was used to measure the reliability of the instrument. Cronbach’s alpha is a measure of reliability, or internal consistency, measuring how closely related a set of items are as a group. Passer (2017) has interpreted Cronbach’s Alpha as shown in Table 1.

Table 1

Cronbach’s Alpha Scale of Internal Consistency

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>Internal Consistency</th>
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<tbody>
<tr>
<td>$\alpha \geq 0.9$</td>
<td>Excellent</td>
</tr>
<tr>
<td>$0.9 &gt; \alpha \geq 0.8$</td>
<td>Good</td>
</tr>
<tr>
<td>$0.8 &gt; \alpha \geq 0.7$</td>
<td>Acceptable</td>
</tr>
<tr>
<td>$0.7 &gt; \alpha \geq 0.6$</td>
<td>Questionable</td>
</tr>
<tr>
<td>$0.6 &gt; \alpha \geq 0.5$</td>
<td>Poor</td>
</tr>
<tr>
<td>$0.5 &gt; \alpha$</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

A Cronbach’s alpha greater than .70 was returned showing the survey instrument to have internal consistency, or scale reliability; thus, the survey was administered.
**Instrumentation**

The questions for this survey use a 7-point Likert scale. Respondents are asked to rate each item using a number on the scale. For this survey a 1-to-7 response scale is used where the following correspond to the weights of the scale:

1 = strongly disagree
2 = disagree
3 = somewhat disagree
4 = neutral
5 = somewhat agree
6 = agree
7 = strongly agree

Research Question 1: Does a statistically significant relationship exist between teachers’ experience in using electronic education tools and their disposition to use Accelerated Reader technology to facilitate reading instruction?

The items corresponding to Research Question 1 are:

11. The use of electronic education tools, such as the Accelerated Reader program, makes my job easier.

12. My interaction with the Accelerated Reader program system is clear and understandable.

13. When setting reading goals for my students, I trust the diagnostic for student reading levels that the Accelerated Reader program provides.

14. I find the Accelerated Reader diagnostic program easy to use.
15. I feel that I need to change the goals recommended by the Accelerated Reader program when setting reading goals for my students.

16. My students find that the Accelerated Reader program is easy to use.

17. I trust that the computer hardware that the Accelerated Reader program is installed on will work properly.

18. I frequently find materials for my class online.


20. I feel that teachers who utilize electronic education tools have higher student outcomes.

Research Question 2: Does a statistically significant relationship exists between teachers’ peer experience and their disposition to trust Accelerated Reader software technology to improve reading instruction?

The items corresponding to Research Question 2 are:

21. People who influence my beliefs think I should trust the Accelerated Reader program to provide individual student learning.

22. People who are important to me think I should trust the diagnostic provided from the Star Reading test to set student reading goals.

23. My peers think that I should trust electronic education tools to reduce my workload.

24. My teaching mentor thinks I should trust the Accelerated Reader program.

25. In general my peers trust electronic education tools to provide individual learning in their classrooms.

26. My colleagues are proficient in using email
27. My peer teachers feel comfortable making online purchases.

28. My peer teachers that utilize the Accelerated Reader program have higher than average student outcomes.

29. My teaching mentor trusts the individual student diagnostic provided by the Accelerated Reader program.

30. My friends feel that the Accelerated Reader program is easy to use.

Research Question 3: Does a statistically significant relationship exist between teachers’ peer support and their disposition to trust that Accelerated Reader software technology improves reading instruction?

The items corresponding to Research Question 3 are:

31. My peers are available to guide me when using the Accelerated Reader program.

32. My peers available to lend assistance when I am using an electronic education tool in my classroom.

33. My peers can provide support when I am using the Accelerated Reading diagnostic.

34. My peers are willing to explain how they implement the Accelerated Reader program in their classes.

35. My peers enjoy using the Accelerated Reader program.

36. In general, my peers offer technical support with classroom technology.

37. My peers are trained to use the Accelerated Reader program.

38. If I have problems using the Accelerated Reader program diagnostic, there is someone in the department that I can go to for help.
39. If I need help with email, a peer teacher is available to help.

40. If I need help using the Internet, my peers are able to help me.

Research Question 4: Does a relationship exist between teachers’ gender and their disposition to trust that the Accelerated Reader technology will improve reading instruction?

The item corresponding to Research Question 4 is:

10. What is your gender?

Research Question 5: Does a relationship exist between teachers’ age and their disposition to trust that the Accelerated Reader technology will improve reading instruction?

The item corresponding to Research Question 5 is:

9. What is your age?

**Procedures**

The data collection process begins by obtaining IRB approval, which is included in Appendix A. The survey cover letter and instrument are included for review as well and can be found in Appendices B and C, respectively. Upon the attainment of IRB approval, a hard copy of the questionnaire was distributed to qualified participants via their school mailboxes. The data for this study were collected from four school districts in the state of Louisiana by means of a questionnaire designed for the study. The data were collected using a questionnaire that was distributed to a group of teachers who have the opportunity to use the Accelerated Reader software distributed through Renaissance Learning.
All data were collected on a volunteer basis and remains anonymous. The questionnaire does not include identifying information, and participants were informed that participation in the survey was voluntary and could cease at any time during the survey without consequence. Once the participants completed the survey, participants placed the surveys in a large collection envelope to ensure anonymity, which was then collected by the investigator. After one week, a follow-up letter was placed in teachers’ mailboxes as a reminder to complete the forms to ensure a high return rate. These precautions were taken to control for the influence of extraneous variables.

**Data Analysis**

Once the data were collected, the investigator began the data entry process and continued with the data analysis. At the beginning of the survey, demographic information was collected so that an accurate description of the sample was available. The data analyses included the following: frequency tables with percentages and means for reporting the data collected from each item on the survey instrument; Spearman \( r \) correlation coefficient used to determine whether a positive, negative, or non-existent relationship exists between the data.

A multiple regression analysis of the dependent variable and the five independent variables was also conducted. The multiple linear regression is used to analyze relationships between multiple independent variables and a dependent variable. A principal component analysis is included as a means of variable classification. Some sources might describe Likert scale data as ordinal because the values of the scale are not continuous. However, the data obtained from Likert scales are combined and usually
analyzed as though they are interval level, which is what was done in this study (Grove, Burns, & Gray, 2013).

**Research Question 1**

Does a statistically significant relationship exist between teachers’ experience in using electronic education tools and their disposition to trust Accelerated Reader technology to facilitate reading instruction?

This question was answered using the 10 items on the survey that measure teachers’ experiences. The mean and standard deviation for teachers’ experiences were calculated. Spearman correlation coefficients between each of the Likert scale items that measure teacher’s experiences and each of the Likert scale items that measure disposition to trust were calculated. A simple linear regression was run to measure the teachers’ experiences composite variable and how it predicts the disposition to trust variable.

**Research Question 2**

Does a statistically significant relationship exists between teachers’ peer experience and their disposition to trust Accelerated Reader software technology to improve reading instruction?

This question is answered using the 10 items on the survey that measured teacher’s peer experiences. The mean and standard deviation for teacher’s peer experiences were calculated. Spearman correlation coefficients between each of the Likert scale items that measure teacher’s peer experiences and each of the Likert scale items that measure disposition to trust were calculated. A simple linear regression
analysis was run to measure the teacher’s peer experiences composite variable and how it predicts the disposition to trust variable.

**Research Question 3**

Does a relationship exist between teachers’ peer support and their disposition to trust that Accelerated Reader software technology improves reading instruction?

This question is answered using the 10 items on the survey that measured teachers’ peer support. The mean and standard deviation for teachers’ peer support were calculated. Spearman correlation coefficients between each of the Likert scale items that measured teachers’ peer support and each of the Likert scale items that measure disposition to trust were calculated. A simple linear regression analysis was run to measure the teachers’ peer support composite variable and how it predicts the disposition to trust variable.

**Research Question 4**

Does a relationship exist between teachers’ gender and their disposition to trust that the Accelerated Reader technology will improve reading instruction?

This question is answered by coding the gender variable as a dummy variable with 0s coded for males and 1s coded for females. Using the gender variable and the composite variable for disposition trust, a simple linear regression analysis was run to measure the teachers’ gender variable and how it predicts the disposition to trust variable.

**Research Question 5**

Does a relationship exist between teachers’ age and their disposition to trust that the Accelerated Reader technology will improve reading instruction?
This question is answered by coding the age variable as six dummy variables that correspond to the survey question (under 25, 25-34, 35-44, 45-54, 55-64, and 65 and over). Using the six age variables and the composite disposition to trust variable, a multiple linear regression analysis was run to measure the age variable and how it predicts disposition to trust.

**Research Question 6**

Do teachers trust that Accelerated Reader technology is perceived as effective in helping students in improving reading instruction?

This question is answered by using the three composite variables (teacher’s experiences, teacher’s peer experiences, and teacher’s peer support), along with gender, and age to conduct a multiple regression analysis that models the relationships among the variables. The multiple linear regression is used to analyze relationships between multiple independent variables and a dependent variable. A principle component analysis is included as a means of variable classification.
CHAPTER IV
RESULTS AND DISCUSSION

Chapter IV presents the data collected for the research. This chapter also presents data analysis results. The statistical tests that were ran to analyze the data, as well as the statistical evidence, are used to examine the research questions that stem from literature study and implications. Statistical findings are also outlined in this chapter and interpretations are given.

The purpose of this study is to investigate the relationships among teachers’ disposition to trust Accelerated Reader and the following antecedents to disposition to trust: teachers’ experiences with Accelerated Reader, teachers’ peer experiences with Accelerated Reader, teachers’ peer support with Accelerated Reader, teachers’ gender and teachers’ age. Cited research indicates that the relational variables have influenced disposition to trust.

Results of Data Collection Findings

Both descriptive and ordinal data are collected for this research. The data analysis for this chapter is divided into three sections: (a) descriptive statistics of the participants, (b) descriptive statistics for each variable, and (c) findings of the quantitative data analysis.
Descriptive Data for Participants

Participants in this study are elementary reading teachers from four school districts in the state of Louisiana. Teachers were asked a series of demographic questions on the survey. Teachers were asked to identify their gender, age, teaching experience, computer experience, Accelerated Reader experience, education, and ethnicity.

Gender of participants. Gender data describing the gender of participants are found in Table 2. Results indicate that the majority of the respondents are female, 89.7% of the participants, while male respondents only make up 10.3% of the participants.

Table 2

Frequency and Percentage of Gender

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>31</td>
<td>10.3%</td>
</tr>
<tr>
<td>Female</td>
<td>270</td>
<td>89.7%</td>
</tr>
<tr>
<td>Total</td>
<td>301</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
**Age of participants.** The age of the participants range from people in their 20s to a few people who were over the age of 65. The lowest frequency age ranges are participants age (<25) and participants age (≥65) with frequencies of 5.6% and 3.0% respectively. Table 3 displays the age of participants. Approximately 59% of the participants fall between the ages of 35 and 54 years old. Additionally 16% of the participants are 55 years and over.

Table 3

*Frequency and Percentage of Age*

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 25</td>
<td>17</td>
<td>5.6%</td>
</tr>
<tr>
<td>25-34</td>
<td>60</td>
<td>19.9%</td>
</tr>
<tr>
<td>35-44</td>
<td>96</td>
<td>31.9%</td>
</tr>
<tr>
<td>45-54</td>
<td>80</td>
<td>26.6%</td>
</tr>
<tr>
<td>55-64</td>
<td>39</td>
<td>13.0%</td>
</tr>
<tr>
<td>65 and over</td>
<td>9</td>
<td>3.0%</td>
</tr>
<tr>
<td>Total</td>
<td>301</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
**Teaching experience.** The participants’ teaching experience ranges from less than 1 year to more than 10 years. Approximately 27% of the participants have less than 5 years of teaching experience. Approximately 45% of the subjects have less than 10 years of experience. Only 3.3% of the respondents have less than 1 year of teaching experience, while the results indicate that more than half (54.9%) of all the teachers surveyed report they have been teaching for more than 10 years.

Table 4

*Frequency and Percentage of Teaching Experience*

<table>
<thead>
<tr>
<th>Teaching Experience</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>10</td>
<td>3.3%</td>
</tr>
<tr>
<td>At least 1 year to 2 years</td>
<td>26</td>
<td>8.6%</td>
</tr>
<tr>
<td>At least 2 years to 5 years</td>
<td>47</td>
<td>15.6%</td>
</tr>
<tr>
<td>At least 5 years to 10 years</td>
<td>53</td>
<td>17.6%</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>165</td>
<td>54.9%</td>
</tr>
<tr>
<td>Total</td>
<td>301</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
**Computer experience.** The participants’ computer experience ranges from less than 1 year to more than 10 years. Approximately 12% of the participants have less than 5 years of teaching experience. Approximately 45% of the subjects have less than 10 years of experience. Only 1.7% of the respondents have less than 1 year of computer experience, while the results indicate that more than half (54.9%) of all the teachers surveyed report they have been using computers for more than 10 years.

Table 5

*Frequency and Percentage of Computer Experience*

<table>
<thead>
<tr>
<th>Computer Experience</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>5</td>
<td>1.7%</td>
</tr>
<tr>
<td>At least 1 year to 2 years</td>
<td>19</td>
<td>6.3%</td>
</tr>
<tr>
<td>At least 2 years to 5 years</td>
<td>13</td>
<td>4.3%</td>
</tr>
<tr>
<td>At least 5 years to 10 years</td>
<td>99</td>
<td>32.9%</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>165</td>
<td>54.8%</td>
</tr>
<tr>
<td>Total</td>
<td>301</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Accelerated Reader experience. The participants’ Accelerated Reader experience ranges from less than 1 year to more than 10 years. Approximately 77% of the participants have less than 5 years of experience with Accelerated Reader. Approximately 94% of the subjects have less than 10 years of experience. While 37.26% of the respondents have less than 1 year of experience with Accelerated Reader, results indicate that only 5.6% of all the teachers surveyed report they have been using Accelerated Reader for more than 10 years.

Table 6

Frequency and Percentage of Accelerated Reader Experience

<table>
<thead>
<tr>
<th>Accelerated Reader Experience</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>112</td>
<td>37.2%</td>
</tr>
<tr>
<td>At least 1 year to 2 years</td>
<td>75</td>
<td>24.9%</td>
</tr>
<tr>
<td>At least 2 years to 5 years</td>
<td>45</td>
<td>15.0%</td>
</tr>
<tr>
<td>At least 5 years to 10 years</td>
<td>52</td>
<td>17.3%</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>17</td>
<td>5.6%</td>
</tr>
<tr>
<td>Total</td>
<td>301</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
**Education.** Because the participants are faculty members teaching third-sixth grade, the educational descriptive statistics of participants are not surprising. Table 7 portrays the educational descriptive statistics. Of the participants, 69.8% of all teachers who responded to the survey hold a bachelor’s degree, while 24.2% of the respondents hold a master’s degree. Fewer than 3% (2.7%) of the teachers report having an educational specialist degree, while only 1% of the respondents reporting have a doctorate degree.

Table 7

*Frequency and Percentage of Education Level*

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s</td>
<td>210</td>
<td>69.8%</td>
</tr>
<tr>
<td>Master’s</td>
<td>73</td>
<td>24.2%</td>
</tr>
<tr>
<td>Educational Specialist</td>
<td>8</td>
<td>2.7%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>3</td>
<td>1.0%</td>
</tr>
<tr>
<td>IC3 Certification</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>294</td>
<td><strong>97.7%</strong></td>
</tr>
<tr>
<td><strong>Missing</strong></td>
<td>7</td>
<td><strong>2.3%</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>301</td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
**Ethnicity.** Table 8 displays the ethnicity descriptive statistics. Of the teachers that responded to the survey, the majority of the respondents are white (79.1%). The second highest ethnicity reported by respondents is black (16.6%), with the remainder (4.3%) of the respondents reporting American Indians or Alaskan Natives, Hispanics or Latinos, or Native Hawaiians or other Pacific Islanders.

Table 8

*Frequency and Percentages of Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indians or Alaska Native</td>
<td>4</td>
<td>1.3%</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Black</td>
<td>50</td>
<td>16.6%</td>
</tr>
<tr>
<td>Hispanic or Latino Origin</td>
<td>6</td>
<td>2.0%</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>3</td>
<td>1.0%</td>
</tr>
<tr>
<td>White</td>
<td>238</td>
<td>79.1%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

**Descriptive Statistics for Each Variable**

In this section, the descriptive statistics for each research question are presented. First, the descriptive statistics for each independent variable (teacher experience, peer experience, peer support, age, and gender) are presented followed by the descriptive statistics for the dependent variable (disposition to trust). Following the descriptive statistics, composite variables for teacher experience, peer experience, and peer support
are calculated by finding the averages for each of the survey items. The reliability measure, Cronbach’s Alpha, is also considered for each variable.

**Teacher experience.** Ten survey items are representative of teachers’ experiences using Accelerated Reader. Response rates for the teacher experience items are displayed in Table 9. Responses are given on a scale of (1-7), where 1 indicates a response of strongly disagree and 7 indicates a response of strongly agree. Five of the 10 survey items result in a median of \((M = 6)\). The lowest median results with the fifth item, which states the need to change the goals recommended by the Accelerated Reader program when setting reading goals for students \((M = 4)\). The median response for all 10 survey items is \((M = 5.5)\), which ranges from somewhat agree to agree. This median implies that participants who use Accelerated Reader have positive experiences.
Table 9

*Ratings of Teacher Experience Descriptive Statistics*

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use of electronic education tools, such as the Accelerated Reader program, makes my job easier.</td>
<td>301</td>
<td>5.39</td>
<td>6.0</td>
<td>1</td>
<td>7</td>
<td>1.62</td>
</tr>
<tr>
<td>My interaction with the Accelerated Reader program system is clear and understandable.</td>
<td>301</td>
<td>5.26</td>
<td>5.0</td>
<td>1</td>
<td>7</td>
<td>1.55</td>
</tr>
<tr>
<td>When setting reading goals for my students, I trust the diagnostic for student reading levels that the Accelerated Reader program provides.</td>
<td>301</td>
<td>5.18</td>
<td>5.0</td>
<td>1</td>
<td>7</td>
<td>1.59</td>
</tr>
<tr>
<td>I find the Accelerated Reader diagnostic program easy to use.</td>
<td>301</td>
<td>5.10</td>
<td>5.0</td>
<td>1</td>
<td>7</td>
<td>1.49</td>
</tr>
<tr>
<td>I feel that I need to change the goals recommended by the Accelerated Reader program when setting reading goals for my students.</td>
<td>301</td>
<td>4.07</td>
<td>4.0</td>
<td>1</td>
<td>7</td>
<td>1.46</td>
</tr>
<tr>
<td>My students find that the Accelerated Reader program is easy to use.</td>
<td>301</td>
<td>5.63</td>
<td>6.0</td>
<td>1</td>
<td>7</td>
<td>1.40</td>
</tr>
<tr>
<td>I trust that the computer hardware that the Accelerated Reader program is installed on will work properly.</td>
<td>301</td>
<td>5.61</td>
<td>6.0</td>
<td>1</td>
<td>7</td>
<td>1.44</td>
</tr>
<tr>
<td>I frequently find materials for my class online.</td>
<td>301</td>
<td>5.11</td>
<td>5.0</td>
<td>1</td>
<td>7</td>
<td>1.49</td>
</tr>
<tr>
<td>I feel that electronic education tools enable individualized learning.</td>
<td>301</td>
<td>5.78</td>
<td>6.0</td>
<td>1</td>
<td>7</td>
<td>1.37</td>
</tr>
<tr>
<td>I feel that teachers who utilize electronic education tools have higher student outcomes.</td>
<td>301</td>
<td>5.45</td>
<td>6.0</td>
<td>2</td>
<td>7</td>
<td>1.34</td>
</tr>
</tbody>
</table>

*Note.* Ratings are based on a 7-point scale: Strongly Disagree (1) to Strongly Agree (7).
The mean responses from the 10 teaching experience items are averaged into one composite teaching experience variable that is used to perform a regression analysis in the following section. The reliability and descriptive statistics for the teaching experience composite variable are provided in Table 10. Results indicate that the mean response for teaching experience is ($\mu = 5.21$), with the full range of potential values (1-7) found. Based on design of the survey instrument, a mean of ($\mu = 5.21$) falls within the range of somewhat agree and agree.

Cronbach’s alpha ($\alpha = .88$) for the 10 survey items measuring teacher experience with Accelerated Reader is found to show high reliability, as determined by the reliability standards established by Passer (2017) in Table 1.

Table 10

*Mean, Standard Deviation for Teacher Experience*

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>$\alpha$</th>
<th>Potential</th>
<th>Actual</th>
<th>Skew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher experience</td>
<td>301</td>
<td>5.21</td>
<td>1.02</td>
<td>0.880</td>
<td>1-7</td>
<td>1.0-7.0</td>
<td>-1.26</td>
</tr>
</tbody>
</table>
Peer experience. Ten survey items are representative of teachers’ peer experiences using Accelerated Reader. Response rates for the peer experience items are displayed in Table 11. Responses are given on a scale of (1-7), where 1 indicates a response of strongly disagree and 7 indicates a response of strongly agree. The highest median results in the sixth survey item, which states that “colleagues are proficient using email” ($M = 6$). Five of the 10 survey items result in median of ($M = 4$). The median response for all 10 survey items is ($M = 4.5$), which ranges from neutral to somewhat agree. This median implies that participants’ peers, or colleagues, who use Accelerated Reader have positive experiences.
Table 11

*Ratings of Peer Experience Descriptive Statistics*

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>People who influence my beliefs think I should trust the Accelerated Reader program to provide individual student learning.</td>
<td>301</td>
<td>4.78</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>1.56</td>
</tr>
<tr>
<td>People who are important to me think I should trust the diagnostic provided from the Star Reading test to set student reading goals.</td>
<td>301</td>
<td>4.62</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>1.37</td>
</tr>
<tr>
<td>My peers think that I should trust electronic education tools to reduce my workload.</td>
<td>301</td>
<td>4.76</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.61</td>
</tr>
<tr>
<td>My teaching mentor thinks I should trust the Accelerated Reader program.</td>
<td>301</td>
<td>4.58</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>1.40</td>
</tr>
<tr>
<td>In general my peers trust electronic education tools to provide individual learning in their classrooms.</td>
<td>301</td>
<td>5.07</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.36</td>
</tr>
<tr>
<td>My colleagues are proficient using email.</td>
<td>301</td>
<td>5.48</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.46</td>
</tr>
<tr>
<td>My peer teachers feel comfortable making online purchases.</td>
<td>301</td>
<td>4.97</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.39</td>
</tr>
<tr>
<td>My peer teachers that utilize the Accelerated Reader program have higher than average student outcomes.</td>
<td>301</td>
<td>4.59</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>1.09</td>
</tr>
<tr>
<td>My teaching mentor trusts the individual student diagnostic provided by the Accelerated Reader program.</td>
<td>301</td>
<td>4.63</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>1.43</td>
</tr>
<tr>
<td>My friends feel that the Accelerated Reader program is easy to use.</td>
<td>301</td>
<td>5.15</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.23</td>
</tr>
</tbody>
</table>

*Note.* Ratings are based on a 7-point scale: Strongly Disagree (1) to Strongly Agree (7).
The mean responses from the 10 peer experience items are averaged into one composite peer experience variable that is used to perform a regression analysis in the following section. The reliability and descriptive statistics for the peer experience composite variable are provided in Table 12. Results indicate that the mean response for peer experience is ($\mu = 4.86$), with the full range of potential values (1-7) found. Based on design of the survey instrument, a mean of ($\mu = 4.86$) falls within the range of neutral to somewhat agree.

Cronbach’s alpha ($\alpha = .89$) for the 10 survey items measuring peer experience with Accelerated Reader is found to show good reliability, as determined by the reliability standards established by Passer (2017) shown in Table 1.

Table 12

*Mean, Standard Deviation for Peer Experience*

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>A</th>
<th>Potential</th>
<th>Actual</th>
<th>Skew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Experience</td>
<td>301</td>
<td>4.86</td>
<td>0.98</td>
<td>0.89</td>
<td>1-7</td>
<td>1.0-7.0</td>
<td>-0.33</td>
</tr>
</tbody>
</table>
Peer support. Ten survey items are representative of teachers’ peer support using Accelerated Reader. Response rates for the peer support items are displayed in Table 13. Responses are given on a scale of (1-7), where 1 indicates a response of strongly disagree and 7 indicates a response of strongly agree. Five of the 10 survey items result in a median of ($M = 6$). The lowest median results in the fifth item, which states that “my peers enjoy using the Accelerated Reader program” ($M = 4$). The median response for all 10 survey items is ($M = 5.5$), which ranges from somewhat agree to agree. This median implies that participants’ peers, or colleagues, are available to help, or support, them with Accelerated Reader.
<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>My peers are available to guide me when using the Accelerated</td>
<td>301</td>
<td>4.78</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.59</td>
</tr>
<tr>
<td>Reader program.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My peers are available to lend assistance when I am using an</td>
<td>301</td>
<td>4.62</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.37</td>
</tr>
<tr>
<td>electronic education tool in my classroom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My peers can provide support when I am using the Accelerated</td>
<td>301</td>
<td>4.76</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.61</td>
</tr>
<tr>
<td>Reader diagnostic.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My peers are willing to explain how they implement the</td>
<td>301</td>
<td>4.58</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.40</td>
</tr>
<tr>
<td>Accelerated Reader program in their classes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My peers enjoy using the Accelerated Reader program.</td>
<td>301</td>
<td>5.07</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td>1.37</td>
</tr>
<tr>
<td>In general, my peers offer technical support with classroom</td>
<td>301</td>
<td>5.48</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.46</td>
</tr>
<tr>
<td>technology.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My peers are trained to use the Accelerated Reader Program.</td>
<td>301</td>
<td>4.97</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.39</td>
</tr>
<tr>
<td>If I have problems using the Accelerated Reader program</td>
<td>301</td>
<td>4.59</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.09</td>
</tr>
<tr>
<td>diagnostic, there is someone in the department that I can go to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for help.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I need help with email, a peer teacher is available to help.</td>
<td>301</td>
<td>4.63</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.43</td>
</tr>
<tr>
<td>If I need help using the Internet, my peers are able to help me.</td>
<td>301</td>
<td>5.15</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.23</td>
</tr>
</tbody>
</table>

*Note.* Ratings are based on a 7-point scale: Strongly Disagree (1) to Strongly Agree (7).
The mean responses from the 10 peer support items are averaged into one composite peer support variable that is used to perform a regression analysis in the following section. The reliability and descriptive statistics for the peer support composite variable are provided in Table 14. Results indicate that the mean response for peer support is ($\mu = 5.23$), with the full range of potential values (1-7) found. Based on design of the survey instrument, a mean of ($\mu = 5.23$) falls within the range of somewhat agree to agree.

Cronbach’s alpha ($\alpha = .94$) for the 10 survey items measuring peer support with Accelerated Reader is found to show excellent reliability, as determined by the reliability standards established by Passer (2017) shown in Table 1.

Table 14

*Mean, Standard Deviation for Peer Support*

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>A</th>
<th>Potential</th>
<th>Actual</th>
<th>Skew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Support</td>
<td>301</td>
<td>5.23</td>
<td>1.14</td>
<td>0.94</td>
<td>1-7</td>
<td>1.0-7.0</td>
<td>-1.04</td>
</tr>
</tbody>
</table>

*Note.* One of the items is reverse scored for the reliability analysis and for creating the composite variable so that higher values will consistently reflect more agreement.
Disposition to trust. Ten survey items are representative of teachers’ disposition to trust Accelerated Reader. Response rates for the disposition to trust items are displayed in Table 15. Responses are given on a scale of (1-7), where 1 indicates a response of strongly disagree and 7 indicates a response of strongly agree. Four of 10 survey items result in a median of \( M = 6 \), while six of 10 items result in a median of \( M = 5 \).

The median response for all 10 survey items is \( M = 5 \), which represents somewhat agree. This median implies that participants who use Accelerated Reader have positive disposition to trust the program.
<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally, I trust Accelerated Reader as an enabler to classroom</td>
<td>301</td>
<td>5.34</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.35</td>
</tr>
<tr>
<td>education.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I trust that my peers who are knowledgeable about Accelerated</td>
<td>301</td>
<td>5.56</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.38</td>
</tr>
<tr>
<td>Reader will help me with the program when needed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I trust that Accelerated Reader enables individualized learning.</td>
<td>301</td>
<td>5.44</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.50</td>
</tr>
<tr>
<td>I trust that my students are able to use the Accelerated Reader</td>
<td>301</td>
<td>5.57</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.39</td>
</tr>
<tr>
<td>program in the classroom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I trust that the Accelerated Reader program allows me to maximize</td>
<td>301</td>
<td>5.19</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.56</td>
</tr>
<tr>
<td>my time in the class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typically, I trust the Accelerated Reader program to allow me to</td>
<td>301</td>
<td>5.21</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.35</td>
</tr>
<tr>
<td>teach more efficiently.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I generally trust the Accelerated Reader program to allow me to</td>
<td>301</td>
<td>5.29</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.31</td>
</tr>
<tr>
<td>teach more effectively.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I trust that my student will perform better on standardized tests</td>
<td>301</td>
<td>5.25</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.46</td>
</tr>
<tr>
<td>if they use the Accelerated Reader program.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually trust new technologies until they prove to be untrustworthy.</td>
<td>301</td>
<td>5.16</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1.52</td>
</tr>
<tr>
<td>Generally, I trust email as a communication tool.</td>
<td></td>
<td>5.75</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.27</td>
</tr>
</tbody>
</table>

*Note.* Ratings are based on a 7-point scale: Strongly Disagree (1) to Strongly Agree (7).
The mean responses from the 10 peer support items are averaged into one composite disposition to trust variable that is used to perform a regression analysis in the following section. The reliability and descriptive statistics for the disposition to trust composite variable are provided in Table 16. Results indicate that the mean response for disposition to trust is ($M=5.68$), with a minimum rating of 2 on a scale of (1-7) found. Based on design of the survey instrument, a mean of ($M=5.68$) falls within the range of somewhat agree to agree.

Cronbach’s alpha ($\alpha=.95$) for the 10 survey items measuring disposition to trust Accelerated Reader is found to show excellent reliability, as determined by the reliability standards established by Passer (2017) in Table 1.

Table 16

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>$\alpha$</th>
<th>Potential</th>
<th>Actual</th>
<th>Skew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposition to Trust</td>
<td>301</td>
<td>5.68</td>
<td>1.10</td>
<td>0.95</td>
<td>1-7</td>
<td>3.2-7.0</td>
<td>-0.925</td>
</tr>
</tbody>
</table>

Research Findings

In this section, the research findings are presented for each research question.

First, correlations for three independent variables (teacher experience, peer experience, and peer support) are presented with the dependent variable (disposition to trust).

Following correlations, regression analyses are presented for each independent variable
(teacher experience, peer experience, peer support, gender, and age) with the dependent variable (disposition to trust). Finally, a multiple regression analysis is presented with each independent variable (teacher experience, peer experience, peer support, gender, and age) forming a model to predict implied trust through the dependent variable (disposition to trust).

**Research Question 1.** The first research question examines whether a statistically significant relationship exist between teachers’ experience in using electronic education tools and their disposition to trust Accelerated Reader to facilitate reading instruction. Spearman’s correlation measures the strength and direction of the association between two variables. Spearman’s coefficients between each of the survey items measuring teacher experience and each of the survey items measuring disposition to trust are provided in Table 17.

All teacher experience variables are positively correlated with all disposition to trust variables, indicating that consistently disposition to trust is rated higher when teacher experience is also rated higher. Likewise, disposition to trust is rated lower when teacher experience is rated lower.

Statistical significance is measured by determining if the probability, or p-value, of an observed effect is less than the significance level, (α<0.05). If a relationship is determined to be statistically significant, than it can be concluded that the relationship is not attributed to chance. The Spearman Rho results indicate that 95 of the 100 correlations among teacher experience and disposition to trust survey items are statistically significant.
Correlation coefficients range from small \((r_s = .014)\) to high \((r_s = .764)\) effect sizes. The strength of the coefficients ranges from weak to strong; however, the majority of the correlations are fall within the moderate range of \(r_s = .4 -.7\) (Passer, 2017). The strongest correlation coefficient is \((r_s = .764, p < 0.01)\), which is one of the only correlations that reach a strong positive strength \((r_s > .700)\). This correlation is between trust that the computer hardware that the Accelerated Reader program is installed on will work properly and trust that Accelerated Reader enables individualized learning. This means that if a teacher trusts the hardware that Accelerated Reader is installed on will work properly, then there is an incremental increase in their disposition to trust that Accelerated Reader enables individualized learning.

Since the majority of the correlation coefficients between teacher experience and disposition to trust are positive, moderate, and significant, these correlations indicate that teachers’ experiences using technology are positively related to teachers’ disposition to trust Accelerated Reader.
Table 17

*Spearman Rho Results for Teacher Experience and Disposition to Trust*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Trust 41</th>
<th>Trust 42</th>
<th>Trust 43</th>
<th>Trust 44</th>
<th>Trust 45</th>
<th>Trust 46</th>
<th>Trust 47</th>
<th>Trust 48</th>
<th>Trust 49</th>
<th>Trust 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Experience 11</td>
<td>.576**</td>
<td>.462**</td>
<td>.620**</td>
<td>.566**</td>
<td>.635**</td>
<td>.628**</td>
<td>.565**</td>
<td>.385**</td>
<td>.398**</td>
<td></td>
</tr>
<tr>
<td>Teacher Experience 12</td>
<td>.593**</td>
<td>.476**</td>
<td>.473**</td>
<td>.561**</td>
<td>.500**</td>
<td>.506**</td>
<td>.474**</td>
<td>.534**</td>
<td>.306**</td>
<td>.299**</td>
</tr>
<tr>
<td>Teacher Experience 13</td>
<td>.591**</td>
<td>.524**</td>
<td>.671**</td>
<td>.479**</td>
<td>.538**</td>
<td>.525**</td>
<td>.489**</td>
<td>.517**</td>
<td>.322**</td>
<td>.416**</td>
</tr>
<tr>
<td>Teacher Experience 14</td>
<td>.628**</td>
<td>.431**</td>
<td>.633**</td>
<td>.542**</td>
<td>.556**</td>
<td>.539**</td>
<td>.472**</td>
<td>.645**</td>
<td>.353**</td>
<td>.362**</td>
</tr>
<tr>
<td>Teacher Experience 15</td>
<td>.082</td>
<td>.168**</td>
<td>.027</td>
<td>.116*</td>
<td>.104*</td>
<td>.090</td>
<td>.130*</td>
<td>.135**</td>
<td>.014</td>
<td></td>
</tr>
<tr>
<td>Teacher Experience 16</td>
<td>.491**</td>
<td>.590**</td>
<td>.585**</td>
<td>.608**</td>
<td>.469**</td>
<td>.426**</td>
<td>.448**</td>
<td>.442**</td>
<td>.397**</td>
<td>.558**</td>
</tr>
<tr>
<td>Teacher Experience 17</td>
<td>.646**</td>
<td>.717**</td>
<td>.764**</td>
<td>.693**</td>
<td>.576**</td>
<td>.555**</td>
<td>.603**</td>
<td>.630**</td>
<td>.539**</td>
<td>.526**</td>
</tr>
<tr>
<td>Teacher Experience 18</td>
<td>.463**</td>
<td>.466**</td>
<td>.522**</td>
<td>.354**</td>
<td>.261**</td>
<td>.357**</td>
<td>.290**</td>
<td>.430**</td>
<td>.370**</td>
<td>.395**</td>
</tr>
<tr>
<td>Teacher Experience 19</td>
<td>.628**</td>
<td>.595**</td>
<td>.732**</td>
<td>.581**</td>
<td>.464**</td>
<td>.537**</td>
<td>.478**</td>
<td>.592**</td>
<td>.466**</td>
<td>.603**</td>
</tr>
<tr>
<td>Teacher Experience 20</td>
<td>.474**</td>
<td>.431**</td>
<td>.540**</td>
<td>.322**</td>
<td>.290**</td>
<td>.449**</td>
<td>.398**</td>
<td>.397**</td>
<td>.289**</td>
<td>.407**</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01.
The corresponding survey items are shown below:

Teacher Experience 11: The use of electronic education tools, such as the Accelerated Reader program, makes my job easier.

Teacher Experience 12: My interaction with the Accelerated Reader program system is clear and understandable.

Teacher Experience 13: When setting reading goals for my students, I trust the diagnostic for student reading levels that the Accelerated Reader program provides.

Teacher Experience 14: I find the Accelerated Reader diagnostic program easy to use.

Teacher Experience 15: I feel that I need to change the goals recommended by the Accelerated Reader program when setting reading goals for my students.

Teacher Experience 16: My students find that the Accelerated Reader program is easy to use.

Teacher Experience 17: I trust that the computer hardware that the Accelerated Reader program is installed on will work properly.

Teacher Experience 18: I frequently find materials for my class online.

Teacher Experience 19: I feel that electronic education tools enable individualized learning.

Teacher Experience 20: I feel that teachers who utilize electronic education tools have higher student outcomes.
Trust 41: Generally, I trust Accelerated Reader as an enabler to classroom education.

Trust 42: I trust that my peers who are knowledgeable about Accelerated Reader will help me with the program when needed.

Trust 43: I trust that Accelerated Reader enables individualized learning.

Trust 44: I trust that my students are able to use the Accelerated Reader program in the classroom.

Trust 45: I trust that the Accelerated Reader program allows me to maximize my time in the class.

Trust 46: Typically, I trust the Accelerated Reader program to allow me to teach more efficiently.

Trust 47: I generally trust the Accelerated Reader program to allow me to teach more effectively.

Trust 48: I trust that my student will perform better on standardized tests if they use the Accelerated Reader program.

Trust 49: I usually trust new technologies until they prove to be untrustworthy.

Trust 50: Generally, I trust email as a communication tool.

The simple linear regression results for research question one are presented in Table 18. In the regression, the teachers’ experience with Accelerated Reader composite variable predicts the disposition to trust Accelerated Reader composite variable. The
results indicate that the model is statistically significant, $F(1,299) = 534.70, (p < .01)$. In addition, teachers’ experience using electronic education tools explains a total of 64.1% of the variability in disposition to trust Accelerated Reader. At the same time, 35.9% of the variability in disposition to trust Accelerated Reader is not explained by teachers’ experiences. This means that teachers’ experiences are important in determining teachers’ disposition to trust Accelerated Reader; however, there are other variables needed to predict disposition to trust. Thus, the results for question one indicate that a statistically significant relationship exists between teachers’ experience in using electronic education tools and their disposition to trust Accelerated Reader technology to facilitate reading instruction.

Table 18

*Simple Linear Regression: Teacher Experience Predicting Disposition to Trust*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher experience</td>
<td>0.92*</td>
<td>0.04</td>
<td>.80</td>
<td>0.85 to 1.00</td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.56*</td>
<td>0.21</td>
<td></td>
<td>0.98 to 1.42</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.641</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>534.70*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*95% CI

* $p < .01$; ** $p < .00$.

**Research Question 2.** The second research question examines the relationship between teachers’ peer experiences with electronic education tools and disposition to trust Accelerated Reader technology to improve reading instruction. Spearman’s
correlation measures the strength and direction between two variables. Spearman’s coefficients between each of the survey items measuring peer experience and each of the survey items measuring disposition to trust are provided in Table 19.

Almost all of the peer experience variables are positively correlated with all disposition to trust variables (98 of 100), indicating that consistently disposition to trust is rated higher when peer experience is also rated higher. Likewise, disposition to trust is rated lower when teacher experience is rated lower.

Statistical significance is measured by determining if the probability, or p-value, of an observed effect is less than the significance level, (α=0.05). If a relationship is determined to be statistically significant, then it can be concluded that the effect reflects the characteristics of the whole population. The Spearman Rho results indicate that 92 of the 100 correlations among peer experience and disposition to trust survey items are statistically significant.

Correlation coefficients range from negligible ($r_s = .011$) to strong ($r_s = .743$) effect sizes. The strength of the coefficients ranges from weak to strong; however, the majority of the correlations fall within the moderate range of $r_s = .4-.7$ (Passer, 2017). The strongest correlation is ($r_s = .743, p<0.01$), which is one of the only correlations that reach strong positive strength. The correlation is between peer teachers feel comfortable making online purchases and trust that Accelerated Reader enables individualized learning. This means that if a teacher’s peer, or colleague, feels comfortable making online purchases that there is an incremental increase in the teacher’s disposition to trust that Accelerated Reader enables individualized learning.
Since the majority of the correlation coefficients between peer experience and disposition to trust are positive, moderate, and significant, these correlations indicate that teachers’ peer experiences using technology are positively related to teachers’ disposition to trust Accelerated Reader.
Table 19

**Spearman Rho Results for Peer Experience and Disposition to Trust**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Trust 41</th>
<th>Trust 42</th>
<th>Trust 43</th>
<th>Trust 44</th>
<th>Trust 45</th>
<th>Trust 46</th>
<th>Trust 47</th>
<th>Trust 48</th>
<th>Trust 49</th>
<th>Trust 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Experience 21</td>
<td>.497**</td>
<td>.351**</td>
<td>.573**</td>
<td>.444**</td>
<td>.454**</td>
<td>.584**</td>
<td>.570**</td>
<td>.511**</td>
<td>.309**</td>
<td>.347**</td>
</tr>
<tr>
<td>Peer Experience 22</td>
<td>.557**</td>
<td>.310*</td>
<td>.421**</td>
<td>.494**</td>
<td>.465**</td>
<td>.468**</td>
<td>.447**</td>
<td>.522**</td>
<td>.268**</td>
<td>.207**</td>
</tr>
<tr>
<td>Peer Experience 23</td>
<td>.516**</td>
<td>.444**</td>
<td>.614**</td>
<td>.386**</td>
<td>.472**</td>
<td>.487**</td>
<td>.423**</td>
<td>.399**</td>
<td>.287**</td>
<td>.360**</td>
</tr>
<tr>
<td>Peer Experience 24</td>
<td>.616**</td>
<td>.359**</td>
<td>.593**</td>
<td>.506**</td>
<td>.526**</td>
<td>.552**</td>
<td>.475**</td>
<td>.615**</td>
<td>.327**</td>
<td>.304**</td>
</tr>
<tr>
<td>Peer Experience 25</td>
<td>.011</td>
<td>.088**</td>
<td>-.051</td>
<td>.043</td>
<td>.108*</td>
<td>.074</td>
<td>.087</td>
<td>.077</td>
<td>.084</td>
<td>-.148</td>
</tr>
<tr>
<td>Peer Experience 26</td>
<td>.459**</td>
<td>.556**</td>
<td>.625**</td>
<td>.603**</td>
<td>.451**</td>
<td>.438**</td>
<td>.468**</td>
<td>.443**</td>
<td>.376**</td>
<td>.541**</td>
</tr>
<tr>
<td>Peer Experience 27</td>
<td>.547**</td>
<td>.639**</td>
<td>.743**</td>
<td>.624**</td>
<td>.518**</td>
<td>.512**</td>
<td>.539**</td>
<td>.553**</td>
<td>.464**</td>
<td>.566**</td>
</tr>
<tr>
<td>Peer Experience 28</td>
<td>.395**</td>
<td>.412**</td>
<td>.437**</td>
<td>.295**</td>
<td>.229**</td>
<td>.327**</td>
<td>.258**</td>
<td>.348**</td>
<td>.361**</td>
<td>.344**</td>
</tr>
<tr>
<td>Peer Experience 29</td>
<td>.492**</td>
<td>.446**</td>
<td>.626**</td>
<td>.471**</td>
<td>.383**</td>
<td>.429**</td>
<td>.376**</td>
<td>.444**</td>
<td>.406**</td>
<td>.575**</td>
</tr>
<tr>
<td>Peer Experience 30</td>
<td>.460**</td>
<td>.409**</td>
<td>.522**</td>
<td>.300**</td>
<td>.274**</td>
<td>.412**</td>
<td>.360**</td>
<td>.353**</td>
<td>.307**</td>
<td>.431**</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01.
The corresponding survey items are shown below:

Peer Experience 21: People who influence my beliefs think I should trust the Accelerated Reader program to provide individual student learning.

Peer Experience 22: People who are important to me think I should trust the diagnostic provided from the Star Reading test to set student reading goals.

Peer Experience 23: My peers think that I should trust electronic education tools to reduce my workload.

Peer Experience 24: My teaching mentor thinks I should trust the Accelerated Reader program.

Peer Experience 25: In general my peers trust electronic education tools to provide individual learning in their classrooms.

Peer Experience 26: My colleagues are proficient using email.

Peer Experience 27: My peer teachers feel comfortable making online purchases.

Peer Experience 28: My peer teachers that utilize the Accelerated Reader program have higher than average student outcomes.

Peer Experience 29: My teaching mentor trusts the individual student diagnostic provided by the Accelerated Reader program.

Peer Experience 30: My friends feel that the Accelerated Reader program is easy to use.

Trust 41: Generally, I trust Accelerated Reader as an enabler to classroom education.
Trust 42: I trust that my peers who are knowledgeable about Accelerated Reader will help me with the program when needed.

Trust 43: I trust that Accelerated Reader enables individualized learning.

Trust 44: I trust that my students are able to use the Accelerated Reader program in the classroom.

Trust 45: I trust that the Accelerated Reader program allows me to maximize my time in the class.

Trust 46: Typically, I trust the Accelerated Reader program to allow me to teach more efficiently.

Trust 47: I generally trust the Accelerated Reader program to allow me to teach more effectively.

Trust 48: I trust that my student will perform better on standardized tests if they use the Accelerated Reader program.

Trust 49: I usually trust new technologies until they prove to be untrustworthy.

Trust 50: Generally, I trust email as a communication tool.

The simple linear regression results for research question two are presented in Table 20. In the regression, the peer experience with Accelerated Reader composite variable predicts the disposition to trust Accelerated Reader composite variable. The results indicate that the model is statistically significant, $F(1,299) = 281.66$, ($p < .00$). In addition, teachers’ peer experiences explain a total of 48.5% of the variability in teachers’
disposition to trust Accelerated Reader. At the same time, 51.5% of the variability in disposition trust Accelerated Reader is not explained by peer experiences. This means that teachers’ peer experiences are important in determining teachers’ disposition to trust Accelerated Reader; however, there are other variables needed to predict disposition to trust. Thus, the results for question two indicate that a statistically significant relationship exists between teachers’ peer experience and their disposition to trust Accelerated Reader.

Table 20

*Simple Linear Regression: Peer Experience Predicting Disposition to Trust*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Experience</td>
<td>0.83**</td>
<td>0.05</td>
<td>.70</td>
<td>0.73</td>
<td>0.93</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.33**</td>
<td>0.25</td>
<td></td>
<td>0.85</td>
<td>1.82</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.485</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>281.66**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .00; **p < .00.

**Research Question 3.** The third research question examines the relationship between teachers’ peer experiences with electronic education tools and disposition to trust Accelerated Reader technology to improve reading instruction. Spearman’s correlation measures the strength and direction between two variables. Spearman’s coefficients between each of the survey items measuring peer support and each of the survey items measuring disposition to trust are provided in Table 21.
All of the peer support variables are positively correlated with all disposition to trust variables, indicating that consistently disposition to trust is rated higher when peer support is also rated higher. Likewise, disposition to trust is rated lower when peer support is rated lower.

Statistical significance is measured by determining if the probability, or p-value, of an observed effect is less than the significance level, ($\alpha=0.05$). If a relationship is determined to be statistically significant, then it can be concluded that the effect reflects the characteristics of the whole population. The Spearman Rho results indicate that 98 of the 100 correlations among peer support and disposition to trust survey items are statistically significant.

Correlation coefficients range from negligible ($r_s=.044$) to strong ($r_s=.729$) effect sizes. The strength of the coefficients ranges from weak to strong; however, the majority of the correlations fall within the moderate range of $r_s=.4-.7$ (Passer, 2017). The strongest correlation is ($r_s = .729, p<0.01$), which is one of the only correlations that reach strong positive strength. The correlation is between peers enjoy using the Accelerated Reader program and trust that Accelerated Reader enables individualized learning. This means that if a teacher’s peer, or colleague, enjoys using the Accelerated Reading program, that there is an incremental increase in the teacher’s trust that Accelerated Reader enables individualized learning.

Since the majority of the correlation coefficients between peer support and disposition to trust are positive, moderate, and significant, these correlations indicate that teachers’ peer support is positively related to teachers’ disposition to trust Accelerated Reader software technology to improve reading instruction.
Table 21

*Spearman Rho Results for Peer Support and Disposition to Trust*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Trust 41</th>
<th>Trust 42</th>
<th>Trust 43</th>
<th>Trust 44</th>
<th>Trust 45</th>
<th>Trust 46</th>
<th>Trust 47</th>
<th>Trust 48</th>
<th>Trust 49</th>
<th>Trust 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Support 31</td>
<td>.412**</td>
<td>.210**</td>
<td>.392**</td>
<td>.353**</td>
<td>.475**</td>
<td>.423**</td>
<td>.314**</td>
<td>.433**</td>
<td>.044</td>
<td>.199**</td>
</tr>
<tr>
<td>Peer Support 32</td>
<td>.490**</td>
<td>.290**</td>
<td>.485**</td>
<td>.400**</td>
<td>.419**</td>
<td>.438**</td>
<td>.426**</td>
<td>.523**</td>
<td>.229**</td>
<td>.256**</td>
</tr>
<tr>
<td>Peer Support 33</td>
<td>.253**</td>
<td>.252**</td>
<td>.357**</td>
<td>.324**</td>
<td>.387**</td>
<td>.328**</td>
<td>.300**</td>
<td>.286**</td>
<td>.133*</td>
<td>.197**</td>
</tr>
<tr>
<td>Peer Support 34</td>
<td>.462**</td>
<td>.331**</td>
<td>.559**</td>
<td>.505**</td>
<td>.558**</td>
<td>.546**</td>
<td>.489**</td>
<td>.558**</td>
<td>.259**</td>
<td>.393**</td>
</tr>
<tr>
<td>Peer Support 35</td>
<td>.614**</td>
<td>.589**</td>
<td>.729**</td>
<td>.571**</td>
<td>.543**</td>
<td>.562**</td>
<td>.530**</td>
<td>.562**</td>
<td>.448**</td>
<td>.488**</td>
</tr>
<tr>
<td>Peer Support 36</td>
<td>.404**</td>
<td>.531**</td>
<td>.358**</td>
<td>.368**</td>
<td>.398**</td>
<td>.302**</td>
<td>.259**</td>
<td>.257**</td>
<td>.158**</td>
<td>.408**</td>
</tr>
<tr>
<td>Peer Support 37</td>
<td>.298**</td>
<td>.297**</td>
<td>.200**</td>
<td>.319**</td>
<td>.333**</td>
<td>.210**</td>
<td>.174**</td>
<td>.221**</td>
<td>.066</td>
<td>.247**</td>
</tr>
<tr>
<td>Peer Support 38</td>
<td>.595**</td>
<td>.465**</td>
<td>.593**</td>
<td>.506**</td>
<td>.444**</td>
<td>.626**</td>
<td>.604**</td>
<td>.657**</td>
<td>.433**</td>
<td>.313**</td>
</tr>
<tr>
<td>Peer Support 39</td>
<td>.583**</td>
<td>.416**</td>
<td>.637**</td>
<td>.518**</td>
<td>.474**</td>
<td>.546**</td>
<td>.440**</td>
<td>.641**</td>
<td>.357**</td>
<td>.458**</td>
</tr>
<tr>
<td>Peer Support 40</td>
<td>.636**</td>
<td>.502**</td>
<td>.598**</td>
<td>.612**</td>
<td>.499**</td>
<td>.460**</td>
<td>.530**</td>
<td>.595**</td>
<td>.420**</td>
<td>.540**</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01.
The corresponding survey items are shown below:

Peer Support 31: My peers are available to guide me when using the Accelerated Reader program.

Peer Support 32: My peers are available to lend assistance when I am using an electronic education tool in my classroom.

Peer Support 33: My peers can provide support when I am using the Accelerated Reader diagnostic.

Peer Support 34: My peers are willing to explain how they implement the Accelerated Reader program in their classes.

Peer Support 35: My peers enjoy using the Accelerated Reader program.

Peer Support 36: In general, my peers offer technical support with classroom technology.

Peer Support 37: My peers are trained to use the Accelerated Reader program.

Peer Support 38: If I have problems using the Accelerated Reader program diagnostic, there is someone in the department that I can go to for help.

Peer Support 39: If I need help with email, a peer teacher is available to help.

Peer Support 40: If I need help using the Internet, my peers are able to help me.

Trust 41: Generally, I trust Accelerated Reader as an enabler to classroom education.
Trust 42: I trust that my peers who are knowledgeable about Accelerated Reader will help me with the program when needed.

Trust 43: I trust that Accelerated Reader enables individualized learning.

Trust 44: I trust that my students are able to use the Accelerated Reader program in the classroom.

Trust 45: I trust that the Accelerated Reader program allows me to maximize my time in the class.

Trust 46: Typically, I trust the Accelerated Reader program to allow me to teach more efficiently.

Trust 47: I generally trust the Accelerated Reader program to allow me to teach more effectively.

Trust 48: I trust that my student will perform better on standardized tests if they use the Accelerated Reader program.

Trust 49: I usually trust new technologies until they prove to be untrustworthy.

Trust 50: Generally, I trust email as a communication tool.
The simple linear regression results for research question three are presented in Table 22. In the regression, the peer support with Accelerated Reader composite variable predicts the disposition to trust Accelerated Reader composite variable. The results indicate that the model is statistically significant, $F(1,299) = 377.05$, ($p < .00$). In addition, teachers’ peer support explains a total of 55.8% of the variability in teachers’ disposition to trust Accelerated Reader. At the same time, 44.25% of the variability in disposition trust Accelerated Reader is not explained by peer support. This means that teachers’ peer support is important in determining teachers’ disposition to trust Accelerated Reader; however, there are other variables needed to predict disposition to trust. Thus, the results for question three indicate that a statistically significant relationship exists between teachers’ peer support and their disposition to trust Accelerated Reader.

Table 22

*Simple Linear Regression: Peer Support Predicting Disposition to Trust*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Support</td>
<td>0.77**</td>
<td>0.04</td>
<td>.75</td>
<td>0.69, 0.85</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.37**</td>
<td>0.21</td>
<td></td>
<td>0.95, 1.78</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td></td>
<td></td>
<td>0.558</td>
</tr>
<tr>
<td>$F$</td>
<td></td>
<td></td>
<td></td>
<td>377.05**</td>
</tr>
</tbody>
</table>

*p < .00; **p < .00.
Research Question 4: The fourth research question examines the relationship between teachers’ gender and disposition to trust Accelerated Reader technology to improve reading instruction. The simple linear regression results where the gender dummy variable predicts the disposition to trust composite variable are presented in Table 23. The results indicate that the model is statistically significant $F(1,299)=3.89$, ($p<.05$). The regression coefficient for gender is ($\beta=-0.44$). This means that gender has an inverse relationship with disposition to trust. Since males were coded with 0s, and females were coded with 1s, it indicates that females have less disposition to trust than males.

Additionally, it is important to note that gender only explains a total of 1% of the variability in disposition to trust Accelerated Reader, which indicates that 99% of the variability in disposition to trust is explained by other variables. This means that teachers’ gender is not important in determining teachers’ disposition to trust Accelerated Reader; however, the population used in this study is primarily made up of female teachers and may not accurately reflect other populations that are not predominately female. Thus, the results for question four indicate that a statistically significant relationship exists between teachers’ gender and their disposition to trust that the Accelerated Reader technology will improve reading instruction.
Table 23

**Simple Linear Regression: Gender Predicting Disposition to Trust**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.44*</td>
<td>0.22</td>
<td>-.871</td>
<td>-0.001</td>
</tr>
<tr>
<td>(Constant)</td>
<td>5.77**</td>
<td>0.21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$R^2$ 0.01  

$F$ 3.89*

* $p < .05$; **$p < .00$.

**Research Question 5:** The fifth research question examines the relationship between teachers’ age and disposition to trust Accelerated Reader technology to improve reading instruction. The multiple linear regression results where the age dummy variables predict the disposition to trust composite variable are presented in Table 24. The age variable is entered as six dummy variables (under 25, 25-34, 35-44, 45-54, 55-64, and 65 and over) and disposition to trust is entered as a composite variable. The results indicate that the model is not statistically significant, $F(1,299)=0.670, (p=.646)$. In addition age only explains a total of 1.1% of the variability in disposition to trust Accelerated Reader, which indicates that 98.9% of the variability in disposition to trust is explained by other variables. This means that teachers’ age is not important in determining teachers’ disposition to trust Accelerated Reader. Thus, the results for question five indicate that a statistically significant relationship does not exist between teachers’ age and their...
disposition to trust that the Accelerated Reader technology will improve reading instruction.

Table 24

*Multiple Regression Results for Age*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 25</td>
<td>-0.345</td>
<td>0.310</td>
<td>-0.068</td>
<td>-0.955</td>
<td>0.265</td>
</tr>
<tr>
<td>25-34</td>
<td>-0.302</td>
<td>0.194</td>
<td>-0.103</td>
<td>-0.684</td>
<td>0.079</td>
</tr>
<tr>
<td>45-54</td>
<td>-0.096</td>
<td>0.178</td>
<td>-0.036</td>
<td>-0.447</td>
<td>0.256</td>
</tr>
<tr>
<td>55-64</td>
<td>-0.231</td>
<td>0.224</td>
<td>-0.066</td>
<td>-0.672</td>
<td>0.209</td>
</tr>
<tr>
<td>65 and Over</td>
<td>-0.149</td>
<td>0.411</td>
<td>-0.022</td>
<td>-0.958</td>
<td>0.660</td>
</tr>
<tr>
<td>(Constant)</td>
<td>5.516</td>
<td>0.120</td>
<td></td>
<td>5.279</td>
<td>5.752</td>
</tr>
</tbody>
</table>

$R^2$ 0.011

$F$ 0.670

**Research Question 6:** The sixth research question examines the relationship among teachers’ experience using Accelerated Reader, teachers’ peer experience using Accelerated Reader, teachers’ peer support with Accelerated Reader, gender, and age and disposition to trust Accelerated Reader technology to improve reading instruction.

Results of the multiple regression where all variables predict disposition to trust Accelerated Reader are shown in Table 25. The results indicate that the model is statistically significant $F(1,299)=86.26, (p<.00)$. 

86
Specifically, teachers’ experience using Accelerated Reader is positively and significantly related to disposition to trust Accelerated Reader \((B = .560, t = 9.742, p = .000)\). Peer experience is positively related \((B = .188, t = 3.318, p = .001)\), and peer support is positively related \((B = .296, t = 6.120, p = .000)\). Gender, age under 25, and age between 45 and 54 are related to disposition to trust Accelerated Reader, \((p<0.05)\). Age between 25 and 34, age between 35 and 44, age between 55 and 64, and age 65 and over are not related to disposition to trust Accelerated Reader. Additionally, the model with all five variables explains a total of 72.7% of the variability in disposition to trust Accelerated Reader, which indicates that only 27.3% of the variability in disposition to trust is not explained.

The results for question six indicate that a statistically significant relationship exists among teachers’ experience, teachers’ peer experience, teachers’ peer support, gender, and age and their disposition to trust that the Accelerated Reader technology will improve reading instruction. Since disposition to trust implies that a future trust will be present (Gefen et al., 2005; McKnight et al., 2002), the same relationship exists among teachers’ experience, teachers’ peer experience, teachers’ peer support, gender, and age and their trust that the Accelerated Reader technology will improve reading instruction. Thus, when the five predictor variables are positively correlated with disposition to trust, teachers trust that Accelerated Reader technology is perceived as effective in helping students in improving reading instruction.
Table 25

*Multiple Regression: Characteristics Predicting Disposition to Trust*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE(B)$</th>
<th>$B$</th>
<th>$T$</th>
<th>Sig. ($p$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Experience</td>
<td>.560</td>
<td>.057</td>
<td>.485</td>
<td>9.742</td>
<td>.000**</td>
</tr>
<tr>
<td>Peer Experience</td>
<td>.188</td>
<td>.057</td>
<td>.157</td>
<td>3.318</td>
<td>.001**</td>
</tr>
<tr>
<td>Peer Support</td>
<td>.296</td>
<td>.048</td>
<td>.289</td>
<td>6.120</td>
<td>.000**</td>
</tr>
<tr>
<td>Gender</td>
<td>-.270</td>
<td>.122</td>
<td>-.070</td>
<td>-2.212</td>
<td>.028*</td>
</tr>
<tr>
<td>Age – Under 25</td>
<td>-.382</td>
<td>.167</td>
<td>-.075</td>
<td>-2.285</td>
<td>.023*</td>
</tr>
<tr>
<td>Age – 45-54</td>
<td>-.217</td>
<td>.096</td>
<td>-.082</td>
<td>-2.276</td>
<td>.024*</td>
</tr>
<tr>
<td>Age – 25-34</td>
<td>-.143</td>
<td>.103</td>
<td>-.049</td>
<td>-1.385</td>
<td>.167</td>
</tr>
<tr>
<td>Age – 55-64</td>
<td>-.166</td>
<td>.119</td>
<td>-.048</td>
<td>-1.393</td>
<td>.165</td>
</tr>
<tr>
<td>Age – 65 and Over</td>
<td>-.089</td>
<td>.219</td>
<td>-.013</td>
<td>-.406</td>
<td>.685</td>
</tr>
<tr>
<td>Constant</td>
<td>.370</td>
<td>.241</td>
<td>.13</td>
<td>1.536</td>
<td>.126</td>
</tr>
</tbody>
</table>

*Note.* Model Statistics: $F = 86.235$, $R = .853$, $R^2 = .727$, adjusted $R^2 = .719$, $p < .000$

*p < .05, **p < .01
CHAPTER V
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this study is to investigate the relationships among teachers’ disposition to trust Accelerated Reader and the following antecedents to disposition to trust: teachers’ experiences with Accelerated Reader, teachers’ peer experiences with Accelerated Reader, teachers’ peer support with Accelerated Reader, teachers’ gender and teachers’ age. Data collection was done using a survey instrument disseminated among the teachers by the principal. The instrument is developed for this study by the researcher. The instrument is used to collect the following data: demographic data, and information about teacher experience, peer experience, peer support, and disposition to trust. The participants are teachers who teach third-sixth grade from four different school districts in north central Louisiana. The instrument response rate is 72%, which includes 301 usable survey responses.

Chapter V includes (a) summarization of study findings (b) conclusions that are drawn based on findings (c) recommendations for application in practice and for further research.

Summary of Findings

Participants in this study are elementary reading teachers from four school districts in the state of Louisiana. Teachers were asked a series of demographic questions
on the survey. Teachers were asked to identify their age, gender, ethnicity, computer experience, teaching experience, Accelerated Reader experience and education.

A majority of the respondents were female 89.7%, while male respondents were 10.3%. The lowest age ranges of participants were under 25 and participants 65 and over with frequencies of 5.6% and 3.0% respectively. Over half (58.5%) of the respondents are between the ages of 35 and 54. A large percentage (72.5%) of the subjects have at least 5 years of teaching experience at the time of the study. Only 1.7% of the teachers surveyed report less than one year of computer experience. Out of the teachers surveyed, 28% have a master’s degree or higher. Finally 79.1% of the respondents indicate that they are white.

In this research study, six research questions are used to determine if there is a relationship between the variables and disposition to trust.

Research Question 1 examines whether there is a statistically significant relationship between teachers’ experiences with electronic education tools and their disposition to trust Accelerated Reader technology to facilitate reading instruction. Rotter (1967) establishes that an individual’s general level of trust has a temporal factor, in that it is based on past experiences with others that lead individuals to develop their generalized attitude of trust. Research carries these finding over to the technology literature as well. For example, if technology performs according to the trustor’s expectations, trust may be maintained or increased based on these experiences. Conversely, not living up to expectations will lower trust (Prenger et al., 2012).

The highest mean response for the questions involving teacher experience with Accelerated Reader is for the survey item which states that electronic education tools
enable individualized learning ($\mu = 5.78$). The lowest mean response is for the survey item which states that there is a need to change the goals recommended by the Accelerated Reader program when setting reading goals for students ($\mu = 4.07$). The mean of ($\mu=5.78$) represents an average response between somewhat agree and agree, while the mean of ($\mu=4.07$) represents an average response between neutral and somewhat agree. The average mean for the teachers’ experience variable is ($\mu=5.21$). In the regression analysis where teacher experience predicts disposition to trust, the model is statistically significant, $F(1,299) = 534.70$, ($p < .00$). In addition, teachers’ experience explains a total of 64.1% of the variability in disposition to trust Accelerated Reader. At the same time, 35.9% of the variability in disposition to trust Accelerated Reader is not explained by teachers’ experiences. This means that teachers’ experiences are important in determining teachers’ disposition to trust Accelerated Reader; however, there are other variables needed to predict disposition to trust. Thus, the results for question one indicate that a statistically significant relationship exists between teachers’ experience in using electronic education tools and their disposition to trust Accelerated Reader technology to facilitate reading instruction.

Research question two examines whether there is a statistically significant relationship between teachers’ peer experience and their disposition to trust Accelerated Reader software technology to improve reading instruction. The literature on peer experience is beneficial for exploring trust within an educational context. The literature indicates this type of virtual mentoring occurs in work contexts (Zey, 2011), services contexts (Aoun, Osseiran-Moisson, Shaid, Howat, & O’Connor, 2012; Haythornwaite, 2011), and educational contexts (Bierema & Merriam, 2002).
The highest mean response for the questions involving teachers’ peer experience is for the survey item that states that colleagues are proficient using email ($\mu = 5.48$). The lowest mean response is for the survey item that states that a teaching mentor thinks the respondent should trust the Accelerated Reader program ($\mu = 4.58$). The mean of ($\mu = 5.48$) represents an average response between somewhat agree and agree, while the mean of ($\mu = 4.58$) represents an average response between neutral and somewhat agree. The average mean for the teachers’ experience variable is ($\mu = 4.86$). In the regression analysis where teachers’ peer experience predicts disposition to trust, the model is statistically significant, $F(1,299) = 281.66$, ($p < .00$). In addition, teachers’ peer experience explains a total of 48.5% of the variability in disposition to trust Accelerated Reader. At the same time, 51.5% of the variability in disposition trust Accelerated Reader is not explained by peer experiences. This means that teachers’ peer experiences are important in determining teachers’ disposition to trust Accelerated Reader; however, there are other variables needed to predict disposition to trust. Thus, the results for question two indicate that a statistically significant relationship exists between teachers’ peer experience and their disposition to trust Accelerated Reader.

Research question three examines whether there is a relationship between teachers’ peer support and their disposition to trust that Accelerated Reader software technology improves reading instruction. A long line of research exists that supports the effectiveness of peer support through social science theories (Festinger, 1954; Lakey & Cohen, 2000; Sarason et al.,1983). Social support theory (Lakey & Cohen, 2000) shows that support that colleagues offer one another can influence personal development and provide buffers against the effects of stress.
The highest mean response for questions involving teachers’ peer support is for the survey item that states peers are able to help with use of the Internet if it is needed ($\mu = 5.15$). The lowest mean response is from the item which states that peers are willing to explain how they implement the Accelerated Reader program in their classes ($\mu = 4.58$). The mean of ($\mu = 5.15$) represents an average response between somewhat agree and agree, while the mean of ($\mu = 4.58$) represents an average response between neutral and somewhat agree. The average mean for peer support variable is ($\mu = 4.23$).

In the regression, the peer support with Accelerated Reader composite variable predicts the disposition to trust Accelerated Reader composite variable. The results indicate that the model is statistically significant, $F(1,299) = 377.05$, ($p < .00$). In addition, teachers’ peer support explains a total of 55.8% of the variability in teachers’ disposition to trust Accelerated Reader. At the same time, 44.25% of the variability in disposition trust Accelerated Reader is not explained by peer support. This means that teachers’ peer support is important in determining teachers’ disposition to trust Accelerated Reader; however, there are other variables needed to predict disposition to trust. Thus, the results for question three indicate that a statistically significant relationship exists between teachers’ peer support and their disposition to trust Accelerated Reader.

Research question four examines whether there is a relationship between teachers’ gender and their disposition to trust that Accelerated Reader technology will improve reading instruction. Research shows that there is a difference in gender regarding perception and use of technology within different settings. Female instructors are more apt to have lower confidence and less experience in using computers as a part of their teaching methods (Markauskaite, 2005; Zhou & Xu, 2007). On the other hand, studies
have shown that male teaches are prone to find the use of computers in the classroom to
more useful and easier to use than their female counterparts (Yuen & Ma, 2002).

The regression results where gender predicts disposition to trust indicate that the
model is statistically significant $F(1,299)=3.89, (p<.05)$. The regression coefficient for
gender is ($\beta = -0.44$). This means that gender has an inverse relationship with disposition
to trust, and that females have less disposition to trust than males.

Additionally, it is important to note that gender only explains a total of 1% of the
variability in disposition to trust Accelerated Reader, which indicates that 99% of the
variability in disposition to trust is explained by other variables. This means that teachers’
gender is not important in determining teachers’ disposition to trust Accelerated Reader;
however, the population used in this study is primarily made up of female teachers and
may not accurately reflect other populations that are not predominately female. Thus, the
results for question four indicate that a statistically significant relationship exists between
teachers’ gender and their disposition to trust that the Accelerated Reader technology will
improve reading instruction.

Research question five examines whether there is a relationship between teachers’
age and disposition to trust that Accelerated Reader will improve reading instruction.
Asked what kind of attributes emerge in which age group and how important they are,
personnel officers reply that in general older workers show a lower learning aptitude, a
lower willingness to learn or flexibility compared to younger workers (Globel & Zwick,
2010). These skills, however, are especially important for the implementation of new
technologies or software.
The regression results where age predict the disposition to trust composite variable indicate that the model is not statistically significant, $F(1,299)=0.670$, ($p=.646$). In addition age only explains a total of 1.1% of the variability in disposition to trust Accelerated Reader, which indicates that 98.9% of the variability in disposition to trust is explained by other variables. This means that teachers’ age is not important in determining teachers’ disposition to trust Accelerated Reader. Thus, the results for question five indicate that a statistically significant relationship does not exist between teachers’ age and their disposition to trust that the Accelerated Reader technology will improve reading instruction.

The sixth research question examines whether teachers trust that Accelerated Reader technology is perceived as effective in helping students in improving reading instruction. To determine whether trust exists, the relationship among teachers’ experience using Accelerated Reader, teachers’ peer experience using Accelerated Reader, teachers’ peer support with Accelerated Reader, gender, and age and disposition to trust Accelerated Reader technology to improve reading instruction is examined. The results indicate that the model is statistically significant $F(1,299)=86.26$, ($p<.00$).

Specifically, teachers’ experience using Accelerated Reader is positively and significantly related to disposition to trust Accelerated Reader ($\beta = .560$, $t = 9.742$, $p = .000$). Peer experience is positively related ($\beta = .188$, $t = 3.318$, $p = .001$), and peer support is positively related ($\beta = .296$, $t = 6.120$, $p = .000$). Gender, age under 25, and age between 45 and 54 are related to disposition to trust Accelerated Reader, ($p<0.05$). Age between 25 and 34, age between 35 and 44, age between 55 and 64, and age 65 and over are not related to disposition to trust Accelerated Reader. Additionally, the model with all
five variables explains a total of 72.7% of the variability in disposition to trust Accelerated Reader, which indicates that only 27.3% of the variability in disposition to trust is not explained.

The results for question six indicate that a statistically significant relationship exists among teachers’ experience, teachers’ peer experience, teachers’ peer support, gender, and age and their disposition to trust that the Accelerated Reader technology will improve reading instruction. Since disposition to trust implies that a future trust will be present (Gefen et al., 2005; McKnight et al., 2002), the same relationship exists among teachers’ experience, teachers’ peer experience, teachers’ peer support, gender, and age and their trust that the Accelerated Reader technology will improve reading instruction. Thus, when the five predictor variables are positively correlated with disposition to trust, teachers trust that Accelerated Reader technology is perceived as effective in helping students in improving reading instruction.

Conclusions

This research shows that teacher experience, peer experience, peer support, and gender all have a relationship with disposition to trust. Teacher experience likely affects disposition to trust because of that particular teacher’s experience with the usage of technology in his or her classroom.

Peer experience likely affects disposition to trust because teachers confer with their peers with regard to his or her peer experiences and it correlates with disposition to trust. Additionally peer experience impacts a teacher’s own personal experience if a teacher allows himself or herself to be influenced by his or her peers.
Peer support likely affects disposition to trust because having a support system allows a teacher to have a sounding board or perhaps a mentor to help him or her when technology does not act the way he or she expects the technology to act.

It is difficult to access the data because there are not a lot of men that participated in the study. That may explain why gender only affected 1% of the overall variance in the model.

One reason age may not have been significant is because of the ubiquitousness of computing. Multiple generations are exposed to computers as he or she goes through everyday life. Thus, age does not have the impact that previous research led the researcher to believe.

Recommendations

In this section, relevant issues of the implications for this study are discussed. The researcher makes the following recommendations for research and application in practice based on the literature review that is conducted and the findings that are found.

Recommendations for Further Research

The instrument could be revised to create more explanatory power. For example, adoption behavior could be evaluated as it relates to disposition to trust. Another construct that could be considered is the General Self-efficacy scale. This research should lead to efforts to correlate teachers with desired student reading outcome in the elementary classroom.

An additional revision of the instrument could be to reduce the number of items per construct due to having too many items can cause survey fatigue for participants.
(Porter, Whitcomb, & Weitzer, 2004). Furthermore it might be beneficial to change the research design from descriptive to experimental to give more explanatory power to the data (Passer, 2017). For example, administering a pre- and post-test during the semester would give the data more complexity.

Replicating this research using a revised instrument that gathered more open-ended commentary from the elementary teachers would also be beneficial. The current survey does not allow the teachers to provide comments, and the comments added could provide more qualitative data (Bishop & Kuula-Luumi, 2017). Because technology is constantly changing, adding items regarding some of the newer features of Accelerated Reader could also be useful.

**Implications for Practice**

In the future, training for using Accelerated Reader in the classroom would likely benefit elementary teachers. This way the teachers would know how to use Accelerated Reader proficiently and why. Implementing a mentor system that allows the teachers to have a person on hand that could lend aid in case there are teachers that need peer support would beneficial. If a mentor system is not implemented, placing teachers in teams could also play a role in providing peer support. Increasing computer training for all teachers could help the teachers become more competent with technology in general and could increase his or her disposition to trust electronic learning tools in the classroom such as Accelerated Reader. Increasing the utilization of Accelerated Reader and demonstrating the benefits could help increase teacher and peer experiences. Finally creating a learning repository or online support group for teachers could provide on hand help for Accelerated Reader.
REFERENCES


101


APPENDIX A

IRB APPROVAL
April 6, 2009

Natalie Campbell
2316 Pinehurst Dr.
Monroe, LA 71201

RE: IRB Study #09-092: Antecedents to Disposition to Trust: Online Assessment as an Enabler of Individualized Instruction

Dear Ms. Campbell:

The above referenced project was reviewed and approved via administrative review on 4/6/2009 in accordance with 45 CFR 46.101(b)(2). Continuing review is not necessary for this project. However, any modification to the project must be reviewed and approved by the IRB prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The IRB reserves the right, at any time during the project period, to observe you and the additional researchers on this project.

Please note that the MSU IRB is in the process of seeking accreditation for our human subjects protection program. As a result of these efforts, you will likely notice many changes in the IRB’s policies and procedures in the coming months. These changes will be posted online at http://www orc msstate edu/human/aahrpp php. The first of these changes is the implementation of an approval stamp for consent forms. The approval stamp will assist in ensuring the IRB approved version of the consent form is used in the actual conduct of research.

Please refer to your IRB number (#09-092) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at cwilliams@research msstate edu or call 662-325-5220.

Sincerely,

[For use with electronic submissions]

Christine Williams
IRB Compliance Administrator

cc: Mabel Okojie
APPENDIX B

RECRUITING MATERIALS
April 7, 2009

Dear Teacher:

My name is Natalie Campbell, and I am conducting a research study in partial fulfillment of the requirements for my doctoral degree from Mississippi State University. I am conducting this research under the direction of my dissertation committee. We appreciate your time and consideration in assisting us with this research. We ask that you read and answer the attached questionnaire.

The questionnaire is based upon your experience with the Accelerated Reader program, peer experience, peer support, and how these areas impact trust with the use of the program. The research is based on the idea that if teachers trust a particular technology, then the technology may be used to enable individualized learning in the classroom.

The questionnaire has been distributed to reading teachers in grades 2-6. If you have inadvertently received the questionnaire, please disregard it or return it to the office. The expected duration of your participation or the amount of time estimated to complete the questionnaire is 15 minutes. Please be assured that your responses will be entirely confidential — and no identifying information will be collected. There are no right or wrong answers, and this is not a test. No one at your organization will ever see your individual responses.

Please also be assured that your participation is entirely voluntary – no one at your school will ever know who did or did not participate in this study. You may quit at any time. You may skip any questions you choose not to answer.

We believe your input is very valuable to our efforts in studying trust in electronic learning tools, and the results of this study may enhance your future classes. We thank you sincerely for agreeing to spend a few minutes to help in our research project.

Thanks in advance for your help. If you have any questions about this study, feel free to contact Natalie Campbell (318.323.2676) or Dr. Mabel CPO Okojie (662.325.7298). If you have questions about your rights as a participant in human subjects research, you may contact the MSU Regulatory Compliance Office at 662-325-5220.

Please tear off this cover letter and keep this sheet for your records. Please place the completed questionnaire in the envelope provided, seal the envelope, and return it to the office where the secretary is collecting questionnaires in one large envelope. I will pick the surveys up from the office on Friday, April 24, 2009.

Sincerely,

Natalie Campbell
Follow-Up Letter

March 23, 2009

Dear Teacher:

If you have not completed the questionnaire placed in your mailbox one week ago on your experiences with Accelerated Reader and/or Accelerated Math programs, you still have one week to turn it in. If you have misplaced the questionnaire, there are additional questionnaires available with the secretary.

As a reminder, I am conducting a research study in partial fulfillment of the requirements for my doctoral degree from Mississippi State University. I am conducting this research under the direction of my dissertation committee. We appreciate your time and consideration in assisting us with this research. We ask that you read and answer the attached questionnaire.

The questionnaire is based upon your experience with Accelerated Reader and/or Accelerated Math Programs, peer experience, peer support, and how these areas impact trust with the use of the program. The research is based on the idea that if teachers trust a particular technology, then the technology may be used to enable individualized learning in the classroom.

The questionnaire has been distributed to reading and math teachers in grades 2-6. If you have inadvertently received the questionnaire, please disregard it or return it to the office. The expected duration of your participation or the amount of time estimated to complete the questionnaire is 15 minutes. Please be assured that your responses will be entirely confidential – and no identifying information will be collected. There is no right or wrong answers, and this is not a test. No one at your organization will ever see your individual responses.

Please also be assured that your participation is entirely voluntary – no one at your school will ever know who did or did not participate in this study. You may quit at any time. You may skip any questions you choose not to answer.

We believe your input is very valuable to our efforts in studying trust in electronic learning tools, and the results of this study may enhance your future classes. We thank you sincerely for agreeing to spend a few minutes to help in our research project.

Thanks in advance for your help. If you have any questions about this study, feel free to contact Natalie Campbell (318.323.2676) or Dr. Mabel CPO Okojie (662.325.7298). If you have questions about your rights as a participant in human subjects research, you may contact the MSU Regulatory Compliance Office at 662-325-5220.

Please tear off this cover letter and keep this sheet for your records. Please place the completed questionnaire in the envelope provided, seal the envelope, and return it to the office where the secretary is collecting questionnaires in one large envelope. I will pick the surveys up from the office one week from today.

Sincerely,

Natalie Campbell
APPENDIX C

SURVEY INSTRUMENT
Accelerated Reader Survey

Please consider your personal experience with the Accelerated Reader software and the Star Assessment program. The data obtained from this study will only be used in aggregate with no identification provided for individual responses. Participation in this survey is strictly voluntary and appreciated; however, there are no consequences for non-participation.

Demographic Information
The demographic information in this section will only be used in aggregate form and will not be used to identify individual respondents. Please check only one item in each category.

1. Do you teach Reading?
   - Yes
   - No

   If you answered “no” to the question above, please stop now and do not continue with the survey. Thank you for your time.

2. Do you use the Accelerated Reader program?
   - Yes
   - No

3. What is your ethnicity?
   - American Indian or Alaska Native
   - Asian
   - Black
   - Hispanic or Latino Origin
   - Native Hawaiian or Other Pacific Islander
   - White

4. How many years of computer experience do you have?
   - Less than 1 year
   - Between 1 and 2 years
   - Between 2 and 5 years
   - Between 5 and 10 years
   - More than 10 years
5. How much teaching experience do you have?
   - Less than 1 year
   - Between 1 and 2 years
   - Between 2 and 5 years
   - Between 5 and 10 years
   - More than 10 years

6. How much experience do you have using the Accelerated Reader program?
   - None
   - Less than 1 year
   - At least a year to 2 years
   - More than 2 years to 5 years
   - More than 5 years to 10 years
   - More than 10 years

7. What is your level of education?
   - Bachelor’s degree
   - Master’s degree
   - Educational specialist
   - Doctorate
   - IC³ Certification
   - Other ___________________

8. Current Grade Level Teaching
   - 2nd grade
   - 3rd grade
   - 4th grade
   - 5th grade
   - 6th grade

9. What is your age?
   - Under 25
   - 25 to 34
   - 35 to 44
   - 45 to 54
   - 55 to 64
   - 65 and Over
10. **What is your gender?**

- [ ] Male
- [ ] Female
The following statements are regarding your experience with the use of the Accelerated Reader assessment software. Please check a single score from 1 to 7 where, 1 – means you Strongly Disagree with the statement, and 7 – means you Strongly Agree with the statement.

<table>
<thead>
<tr>
<th>Experience with Accelerated Reader</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. The use of electronic education tools, such as the Accelerated Reader program, makes my job easier.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. My interaction with the Accelerated Reader program system is clear and understandable.</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13. When setting reading goals for my students, I trust the diagnostic for student reading levels that the Accelerated Reader program provides.</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I find the Accelerated Reader diagnostic program easy to use.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. I feel that I need to change the goals recommended by the Accelerated Reader program when setting reading goals for my students.</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16. My students find that the Accelerated Reader program is easy to use.</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. I trust that the computer hardware that the Accelerated Reader program is installed on will work properly.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18. I frequently find materials for my class online.</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19. I feel that electronic education tools enable individualized learning.</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I feel that teachers who utilize electronic education tools have higher student outcomes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
The following statements are regarding peer experience with the use of the **Accelerated Reader** assessment software. Please check a single score from 1 to 7 where, 1 – means you **Strongly Disagree** with the statement, and 7 – means you **Strongly Agree** with the statement.

<table>
<thead>
<tr>
<th>Peer Experience with Accelerated Reader</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

21. People who influence my beliefs think I should trust the Accelerated Reader program to provide individual student learning.

22. People who are important to me think I should trust the diagnostic provided from the Star Reading test to set student reading goals.

23. My peers think that I should trust electronic education tools to reduce my workload.

24. My teaching mentor thinks I should trust the Accelerated Reader program.

25. In general my peers trust electronic education tools to provide individual learning in their classrooms.

26. My colleagues are proficient using email.

27. My peer teachers feel comfortable making online purchases.

28. My peer teachers that utilize the Accelerated Reader program have higher than average student outcomes.

29. My teaching mentor trusts the individual student diagnostic provided by the Accelerated Reader program.

30. My friends feel that the Accelerated Reader program is easy to use.
The following statements are regarding peer support with the use of the **Accelerated Reader** assessment software. Please check a single score from 1 to 7 where, 1 – means you **Strongly Disagree** with the statement, and 7 – means you **Strongly Agree** with the statement.

<table>
<thead>
<tr>
<th>Peer Support with Accelerated Reader</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31. My peers are available to guide me when using the Accelerated Reader program.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. My peers are available to lend assistance when I am using an electronic education tool in my classroom.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. My peers can provide support when I am using the Accelerated Reading diagnostic.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. My peers are willing to explain how they implement the Accelerated Reader program in their classes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. My peers enjoy using the Accelerated Reader program.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. In general, my peers offer technical support with classroom technology.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. My peers are trained to use the Accelerated Reader program.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. If I have problems using the Accelerated Reader program diagnostic, there is someone in the department that I can go to for help.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. If I need help with email, a peer teacher is available to help.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. If I need help using the Internet, my peers are able to help me.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The following statements are regarding your disposition to trust with regard to technology in the classroom. Please check a single score from 1 to 7 where, 1 – means you **Strongly Disagree** with the statement, and 7 – means you **Strongly Agree** with the statement.

<table>
<thead>
<tr>
<th>Disposition to Trust</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>41. Generally, I trust technology as an enabler to classroom education.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42. I trust that my peers who are knowledgeable about technology will help me with technology when needed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43. I trust that technology enables individualized learning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44. I trust that my students are able to use technology in the classroom.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45. I trust that technology allows me to maximize my time in the class.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46. Typically, I trust technology to allow me to teach more efficiently.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. I generally trust technology to allow me to teach more effectively.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48. I usually trust the Internet to provide material for my classroom.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49. I usually trust new technologies until they prove to be untrustworthy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50. Generally, I trust email as a communication tool.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for participating in our survey! Please place the completed survey in the envelope that came in the questionnaire packet, and return the sealed envelope to the office where the secretary is collecting the surveys in a larger envelope.