Parental Involvement in the Digital Age:
Examining Parental Access to Student Web Portals in Grades 7-12

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ABSTRACT

Parental involvement in schools has been accepted as essential in effective education. In the present study, the researcher determined if parental access to student web portals had an impact on academic outcomes for students in grades 7-12. The study utilized 600 pre-existing student data sets that included parental log entries into student web portals. Using the same sample, the researcher determined the information parents accessed most from student portals and examined how parents used the information. No significant relationship was found between the academic outcomes for students whose parents accessed their web portals. Results indicated that parents accessed student grades and interacted with their child most often after logging onto web portals. These findings suggest that educators should not rely solely on web portals as means to foster parental involvement in their schools.

Keywords: parental involvement in schools, student web portals, PowerSchool, strategies for parental involvement, adolescent education, middle school, junior high school, high school
DEDICATION

For my children Tyler, Karly, and Drew.
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>CHAPTER I: INTRODUCTION ..................................................................</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Background of the Problem</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Rationale &amp; Significance of the Study</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Purpose of the Study</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Theoretical Framework</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Research Questions</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Definition of Terms</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Limitations</td>
<td>11</td>
</tr>
<tr>
<td>II</td>
<td>CHAPTER II. LITERATURE REVIEW</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Mandates</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Childhood Education</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Middle School</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>High School</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>K-12 Summary</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Barriers to Parental Involvement</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Predictors of Parental Involvement: Hoover-Dempsey and Sandler Model</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>The Epstein Model for Parental Involvement</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Student Information Systems</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>33</td>
</tr>
<tr>
<td>III</td>
<td>CHAPTER III. METHODOLOGY</td>
<td>35</td>
</tr>
</tbody>
</table>
Research Questions
Research Design
Participants
Instrumentation & Data Sources
Data Collection Procedures
Data Analysis
Assumptions

CHAPTER IV. RESULTS
Characteristics of the Sample
Instrument Validity and Reliability
Research Question 1
Research Question 2
Research Question 3
Summary

CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS
Review of the Study
Discussion
Research Question 1
Research Question 2
Research Questions 3
Conclusion
Recommendations
Future Research Opportunities
REFERENCES .................................................................................................................. 85
APPENDIX A. IRB APPROVAL ....................................................................................... 90
APPENDIX B. INVITATION TO PARTICIPATE IN THE STUDY .................................... 91
APPENDIX C. SURVEY .................................................................................................... 92
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Summary of methods and tools used for analysis of data</td>
<td>43</td>
</tr>
<tr>
<td>2</td>
<td>Summary of t-tests comparing GPA between PAS and NPAS in Grades 7-12</td>
<td>49</td>
</tr>
<tr>
<td>3</td>
<td>Summary of t-tests comparing days absent between PAS and NPAS in Grades 7-12</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Summary of t-tests comparing disciplinary infractions between PAS and NPAS in Grades 7-12</td>
<td>51</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Survey responses related to information retrieved from PowerSchool</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>Survey responses related to parent actions after accessing PowerSchool</td>
<td>54</td>
</tr>
<tr>
<td>3</td>
<td>Survey responses related to parent-child interaction after accessing PowerSchool</td>
<td>55</td>
</tr>
<tr>
<td>4</td>
<td>Survey responses related to parent-teacher contact after accessing PowerSchool</td>
<td>56</td>
</tr>
<tr>
<td>5</td>
<td>Survey responses related to specific parent-teacher contact after accessing PowerSchool</td>
<td>57</td>
</tr>
<tr>
<td>6</td>
<td>Survey responses related to parents helping their child after accessing PowerSchool</td>
<td>58</td>
</tr>
<tr>
<td>7</td>
<td>Survey responses related to parent-child conversations regarding education</td>
<td>59</td>
</tr>
<tr>
<td>8</td>
<td>Survey responses related to parent beliefs regarding parental involvement</td>
<td>60</td>
</tr>
<tr>
<td>9</td>
<td>Survey responses related to parent beliefs related to PowerSchool access</td>
<td>61</td>
</tr>
<tr>
<td>10</td>
<td>Survey responses related to parental motivation to access PowerSchool</td>
<td>63</td>
</tr>
</tbody>
</table>
CHAPTER I. INTRODUCTION

Background of the Problem

Educators in the twenty-first century face the challenge of developing parental involvement programs in schools. The documented number of programs designed by administrators for the purpose of increasing parental involvement in their schools has grown considerably during the past two decades (Myers & Myers, 2013). University and college degree requirements for educators in the area of parental involvement further emphasize this trend (Epstein & Sanders, 2006). One factor prompting the increased number of parental involvement programs in schools and greater focus on educational training has been legislative mandates. Namely, the No Child Left Behind Act (NCLB) of 2001 required US school districts receiving Title I funding to develop programs to incorporate parental involvement into their educational practices (NCLB, 2002). The Every Student Succeeds Act (ESSA) of 2015 replaced NCLB, but parental engagement requirements in schools remained in the legislation. The ESSA (2015) specifies that schools address communication between teachers and parents as well as offer frequent reports to parents regarding student progress. The increased interest in parental involvement in schools has been fueled by the reported educational benefits students receive when parents are involved in their education (Gonzalez-DeHass, Willems, & Doan Holbein, 2005; Jeynes, 2012).

A number of studies have been conducted on the topic of parental involvement in schools. According to Comer and Haynes (1991), parental involvement is a desirable component in schools and is essential for effective education. The merits of parental involvement are thought to transcend grade levels (Wilder, 2014) from early childhood (Sy, Gottfried, & Gottfried, 2013) to adolescence (Hill & Tyson, 2009) and through secondary school (Wang &
Sheikh-Khalil, 2014). Parental involvement has been found to play an important role in students’ college academic success as well. For example Cheng, Ickes, and Verhofstadt (2012) found that parental involvement had a positive effect on college students’ GPAs. Further, regardless of cultural background, education, and socioeconomics, parental involvement has been highly associated with improvements in the areas of student achievement and attendance (Wilder, 2014).

Accordingly, parental involvement in education often begins in the earliest stages of a child’s education. Throughout elementary school, parental involvement has been positively related to academic achievement, high student self-esteem, high attendance, positive attitude, homework readiness, and educational aspirations (Greenwood & Hickman, 1991). As children enter adolescence, parental support helps promote academic mastery and influences children beyond the immediate future (Brueck, Mazza, & Tousignant, 2012). During this stage of student development, parental involvement assists in conveying achievement expectations, the value of education, and positive learning strategies (Hill & Tyson, 2009). At the secondary level, students tend to achieve higher grades, indicate higher aspirations, and have fewer disciplinary problems when parents are involved (Wang, Hill, & Hofkens, 2014). Furthermore, parental involvement during high school has been found to have a significant positive correlation with greater collegiate success and play an important role in students’ overall grade point average (Cheng et al., 2012).

Despite the reported benefits of parental involvement at all levels of education, research has suggested that parental involvement declines as students enter adolescence and continues to decline throughout their high school years (Hill & Tyson, 2009). Reasons for this decline at higher grade levels were linked to a general lack of self-efficacy among parents related to the
content of their child’s schoolwork (Hill & Tyson, 2009; Hoover-Dempsey & Sandler, 1997). Another factor that contributed to the decline in parental involvement during this stage included a greater sense of autonomy and independence that students often desire in the teenage years (Hill & Tyson, 2009). Hill and Tyson (2009) reported that as students enter adolescence, school structure changes and becomes more bureaucratic with more course offerings and a greater number of teachers. Such changes, along with the developmental changes students experience at this stage, necessitate new strategies for parental involvement that are more appropriate and applicable for junior high and high school students.

Schools and parents of adolescents used strategies aimed at promoting effective parenting skills such as how to create home atmospheres that are conducive to, and supportive of, learning (Kaplan-Toren, 2013). In this context, supportive parenting included parents monitoring their child’s daily school activities (Hill & Tyson, 2009) as well establishing parameters and guidelines for children (Kaplan-Toren, 2013). Additionally, relationships in the home in which children perceived their parents to value education were found to have strong relationships with student motivations and academic competence. Researchers have found home-based parental involvement to be positively linked to student academic performance (Kaplan-Toren, 2013) as well as a suggested school strategy for parental involvement (Marchant, Paulson, & Rothlisberg, 2001). To help bridge the gap between school and home, Epstein (2001) suggested that schools inform families about programs and student progress via two-way communication. Two supportive examples include the use of technology, such as student web portals, and traditional communication techniques such as letters sent home or telephone calls (Epstein & Voorhis, 2010).
As technology has advanced, many schools have offered web-based student portals, also known as student information systems (SIS) or online grade books, which may be accessed by parents at any time. One such student web portal is PowerSchool. A product of Vista Equity Partners, PowerSchool allows school personnel to compile student data and records including grades, attendance, and disciplinary incidents. Schools that utilize SIS provide parents with credentials, usually in the form of a password, which allows the parent or guardian to view their child’s online information (Bird, 2006).

While student web portals such as PowerSchool have become increasingly popular, the significance that parental student portal access has on student academic achievement remains unknown. The purpose of this study was to determine whether parental access to their child’s PowerSchool web portal had a relationship with their child’s academic outcomes when compared to same-school peers whose parents did not access their web portals. This study also examined what student information parents most often seek and how parents utilize the information obtained from their student’s web portal. When considering parental involvement strategies for their schools, administrators, teachers, and parents would benefit from knowing if a significant relationship existed between parental access to student portals and student academic outcomes. Such knowledge may provide data for decisions related to the use of web portals as components of parental involvement programs in schools.

Rationale & Significance of the Study

Over the past twenty years, the number of parental involvement programs designed by school personnel have increased (Myers & Myers, 2013). Developing contextually focused strategies for increased parental involvement in their schools is one of the demands placed upon school administrators. Contextually focused strategies are those which are “an official
component of the school organization to promote student learning—rather than an accidental set of activities for a small number of parents” (Epstein & Voorhis, 2010, p. 2). For example, contextually focused programs are developed by school personnel, included in school policy, and implemented. Parental access to student portals is an example of a contextually focused, parental involvement strategy. However, few studies have examined if differences exist between the academic outcomes of students whose parents accessed their web portals when compared with same-school peers whose parents did not access their web portals. Additionally, it is unknown how parents utilize student information and what type of student data is retrieved most often by parents from student web portals.

A general consensus regarding parental involvement in schools is that the practice is beneficial to student academic outcomes (Jeynes, 2012; Wilder, 2014). Gonzales-DeHass (2005) explained that by being involved, parents boost student confidence, offer a sense of security, and make a connection between school and the home. Despite the benefits, research indicated that a general decline in parental involvement occurs during a student’s adolescent years (Chen & Gregory, 2009). A general student desire for greater autonomy during adolescence has been attributed to the decline (Hill & Tyson, 2009). School personnel are challenged to identify parental involvement strategies that are age-appropriate for adolescents. Parental involvement strategies that are flexible and less rigid with parent schedules have been suggested (Comer & Hayes, 1991). For example, when planning parental involvement activities, school personnel can take parental work schedules into consideration and offer alternative meeting times, rather than one-time mandatory meetings. Parental involvement strategies that are home-based were also suggested (Kaplan-Toren, 2013; Marchant et al., 2001). These included checking student academic progress, assisting in course selections, and reading with their children (Gonzales-
DeHass et al., 2005). Parental access to online grades falls into the suggested strategy criteria for parental involvement, but little is known about the significance checking their student’s online grade books has on student academic achievement.

**Purpose of Study**

The purpose of this study was to determine if parental access to student web portals has a significant impact on academic outcomes as measured by GPA, attendance, and disciplinary referrals for students enrolled in grades 7-12. The sample used in the study was from a suburban school district with approximately 2,100 students enrolled in grades 7-12. The study used pre-existing data generated by parental log entries into PowerSchool, the student web portal utilized by the school district. Using the same sample, the study sought to determine what information parents accessed most often in student portals and how parents used the accessed information.

**Theoretical Framework**

The researcher used the Hoover-Dempsey and Sandler model (HDS) (1997) and Epstein model (1995, 2001) as the theoretical frameworks to guide the study. Both models are related to parental involvement in schools and have been widely cited in the literature. Although broad in scope, the HDS (1997) and Epstein (1995, 2001) models provided framework for the present study which examined an under-researched involvement strategy: parental access to student web portals.

The HDS model (1997) is rooted in psychology and examines why parents become involved in their child’s educational experience. Hoover-Dempsey and Sandler (1997) placed an emphasis on three main sources of motivation that lead to parental involvement in their child’s education. The first is related to a parent’s personal role construction and self-efficacy (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005). Role construction includes parental
beliefs pertaining to involvement and responsibility related to education (Hoover-Dempsey & Sandler, 1997). The authors described self-efficacy as the parent’s belief that their involvement in school will benefit the child (Hoover-Dempsey & Sandler, 1997). The second motivator for parents becoming involved is based on their perceived invitation. Invitations from the school, teachers, and children motivate parents to become involved (Hoover-Dempsey & Sandler, 1997). The third area involves the life context of the parents, which includes the amount of time parents can devote to their involvement due to commitments such as work, time, energy, and health. The HDS model offers a useful framework for understanding what prompts parents to become involved both at home and at school (Green et al., 2007).

Several studies have supported the HDS model’s framework for predicting parental involvement. Park and Holloway’s (2013) analysis supported the primary constructs within the HDS model. Both parental role construction and school outreach efforts were significantly related to parental involvement in a high school setting (Park & Holloway, 2013). Green, Walker, Hoover-Dempsey, and Sandler (2007) also supported the HDS model. Green et al. (2007) suggested that parental involvement was predicted by a parental sense of efficacy and by general invitations from children to become involved. Additionally, Deslandes and Bertrand (2005) found that parental role construction and parent perceptions of teacher invitations predicted the involvement of parents of ninth grade students.

On the whole, Hoover-Dempsey and Sandler (1997) suggested why parents chose to become involved in their children’s education. The authors noted role construction, perceived invitation, and life context of parents to be the chief motivators behind parental involvement in their child’s education (Hoover-Dempsey & Sandler, 1997). Studies supportive of the HDS model generated similar findings (Deslandes & Bertrand, 2005; Green et al., 2007; Park &
Holloway, 2013). Similarly, the Epstein (1995, 2001) model examined parental involvement in schools. However, unlike the HDS model, the Epstein model explained types of parental involvement rather than the factors that motivated parents to become involved.

Epstein’s (1995, 2001) model for parental involvement is one of the most widely referenced models in the research. This model is key in educational literature and included here for theoretical consideration. The Epstein model outlined six types of family involvement behaviors: (a) parenting, (b) communicating, (c) volunteering, (d) learning at home, (e) decision-making, and (f) collaborating with the community (Epstein, 2001). According to Epstein (2001), the three most important contexts in which children develop are family, school, and community—all which interconnect and overlap with the aforementioned involvement behaviors. The Epstein model’s pluralistic framework may assist school leaders in developing strategies to increase parental involvement in a variety of ways.

In support of Epstein (2001), Hill and Tyson (2009) agreed that parental involvement in schools is multifaceted. Hill and Tyson (2009) indicated that parental involvement strategies at school and home led to increased academic student performance. In further support of the Epstein model, Knopf and Swick (2008) recommended approaching parental involvement as a multifaceted construct rather than just school oriented. Multiple approaches to foster parental involvement such as electronic communication, home visits, and recorded versions of school programs were suggested to school leaders to better accommodate parents (Knopf & Swick, 2008). Namely, it was suggested that school leaders take the work schedules, transportation, and family structure into consideration when collaborating with parents (Knopf & Swick, 2008). These findings support Comer and Haynes’s (1991) assertion that inflexible parental
involvement programs were unlikely to succeed and supported Epstein’s (2001) suggestion for collaborative and flexible partnerships between school and home.

Despite its utility, the Epstein model also has inherent limitations. For example, Bower and Griffin (2011) and Jeynes (2012) have commented on several limitations of the Epstein model. Bower and Griffin (2011) have argued that the Epstein model is limited because school leaders often dictate home-based strategies to parents. The same authors argue that parental involvement has typically been defined and evaluated by school leaders rather than families (Bower & Griffin, 2011). However, Bower and Griffin’s (2011) critiques do not account for Epstein’s (2001) suggestion that school leaders and families collaborate in determining the strategies that work best for each individual school. Jeynes (2012) has suggested Epstein’s model is too simplistic in scope. Despite this claim, Jeynes (2012) does not elaborate on the critique.

In sum, the HDS (1997) and Epstein (1995, 2001) models provided theoretical framework for the present study. The HDS model (1997) suggested why parents were likely to become involved in their child’s education while the Epstein model (1995, 2001) identified types of family involvement behaviors. Both the HDS and Epstein models provided framework for the present study that examined an under-researched parental involvement strategy specific to parental access to student web portals.

**Research Questions**

The theoretical framework related to why parents choose to become involved in their child’s education (Hoover-Dempsey & Sandler, 1997) and Epstein’s (1995, 2001) model for a multifaceted approach to parental involvement influenced the formation of the research questions for this study. In conjunction with the reported increase in parental involvement programs
(Myers & Myers, 2013) and the suggestion for home-based parental involvement strategies (Hill & Tyson, 2009), the following research questions were developed:

1. What relationship does parental access to online student portals have with student GPA, attendance or behavior?
2. What information do parents seek when accessing online student portals?
3. How do parents utilize student information after accessing it from online portals?

It is hypothesized that students whose parents have accessed their web portals will have higher academic outcomes when compared to same-school peers whose parents did not access their web portals. To this end, it is expected that the students whose parents accessed their web portals will have higher GPAs, less absences from school, and less disciplinary infractions. The researcher also expects that parents most often check student grades when accessing their student’s web portal. Further, the researcher anticipates that parents addressed their child in some way after obtaining information from their student’s web portal.

**Definition of Terms**

*Academic Socialization:* Academic socialization is the communication between parents and their children regarding educational expectations, occupational aspirations, learning strategies, future plans, and the relevance of material presented in school with student goals (Wang & Sheikh-Khalil, 2014).

*High School:* A high school is a school building that exists for the purpose of educating students in grade levels 9 through 12.

*Junior High School:* A junior high school is a building that exists for the purpose of educating students in grade levels 7 and 8.
Parental Involvement: Parental involvement is the participation of parents in regular two-way and meaningful communication involving student learning and other school activities (No Child Left Behind Act, 2002).

Parental Involvement Programs: Parental involvement programs are planned series of events designed by schools to involve parents in the educational experiences of their children (Epstein, 1995, 2001).

Parental Involvement Strategies: Parental involvement strategies are plans of action or policies designed by schools to achieve parental involvement in schools (Epstein, 1995, 2001).

PowerSchool: PowerSchool is a student portal utilized by the participants in this study. PowerSchool is used to compile student outcomes and demographic information.

Student Outcomes: Student outcomes are measurements of progress and behaviors that are recorded by schools including GPA, daily absences, and disciplinary infractions.

Student Portals: Student portals are digital web based programs that are used to compile student outcomes and demographic information. Student portals are also referred to as Student Information Systems (SIS) or online student grade books (Weinstein, 2005).

Limitations

Two limitations have been identified as potential barriers to this study. The first limitation includes the parental log-in process to PowerSchool, the district’s student portal. Prior to the onset of the school year, both parents and students were provided with separate log-in credentials. PowerSchool records separate log-in data for parents and students. However, it is unknown if parents and students voluntarily share log-in credentials. It would be possible for a parent to access PowerSchool using their student’s credentials. In such a case, PowerSchool would record data of a student log-in rather than a parent log-in, which would result in incorrect
parental log-in records. To discourage such practices, the district’s network policy explicitly prohibits the sharing of log-in credentials. However, the policy does not provide a safeguard to prevent the sharing of account information.

A second limitation involves parents who access PowerSchool by using the program’s mobile application. At the present time, PowerSchool does not record parental log-in entries when the mobile application is used. Use of the application could create records that misrepresent actual parental log-ins to PowerSchool. The district does not widely promote use of the PowerSchool application, but several employees utilize the application to check the SIS of their students who attend the district schools. The researcher is aware of three district employees who utilize the application and can therefore omit their children from the sample. However, it is unknown if other parents use the application.

**Delimitations.** This study focuses on students in one suburban school district located in the Midwest. Only students attending the junior high school and high school are included in the sample size. Data was gathered from the 2014-2015 school year through PowerSchool, the district’s chosen brand of SIS. The boundaries of the study have been established to provide a convenience sample for the researcher. The generalizability thus applies only to the results gathered from the study’s specific sample size, rather than all junior high and high school students throughout the country.

Individualized student learning characteristics, such as the identification of students as ‘gifted’ or ‘special needs’ may contribute to student academic achievement. However, such factors related to individual student ability level were not accounted for in this study. Additional factors such as gender, race, and socio economic status were not identified or analyzed as part of the study.
CHAPTER II. LITERATURE REVIEW

In the following review, a synthesis of recent empirical literature is presented suggesting the general benefits of parental involvement in the education of school-aged children. A large volume of literature regarding parental involvement in schools was produced throughout the 2000s. Many studies appeared in close proximity to the NCLB of 2001. As state mandates followed, researchers identified both at-home and at-school parental involvement practices and examined developmentally appropriate strategies for parental involvement. Academic socialization, which is appropriate at all grade levels and linked to improved student educational outcomes, appeared as a key form of parental involvement mentioned in the literature.

Through a review of the literature, the researcher has identified and presented four barriers to effective parental involvement including (a) low at-school participation for minority groups, (b) low at-school participation among low socioeconomic (SES) groups, (c) a general decline in parental involvement through adolescence and, (d) lack of teacher training.

Additionally, frameworks by Hoover-Dempsey and Sander (1997) and Epstein (1995, 2001) are presented along with suggested practices for parental involvement in schools. Finally, parental involvement strategies for educators are explored with an emphasis on utilizing new technologies for communicating with parents. One such technology is PowerSchool, a student web portal that parents can access to view their children’s academic progress. A key component among much of the literature is defining parental involvement.

A specific definition of parental involvement has varied among researches (Bower & Griffin, 2011; Gonzalez-DeHass et al., 2005; Knopf & Swick, 2007; Young, Austin, & Growe, 2013). The common themes that appeared in delineations of parental involvement included parents being involved, in conjunction with the school, with the education of their child
(Christenson & Sheridan, 2001; Hill et al., 2004). For example Hill and Taylor (2004) identified the following activities as parental involvement: “volunteering at school, communicating with teachers and other school personnel, assisting in academic activities at home, and attending school events, meetings of parent-teacher associations (PTAs), and parent-teacher conferences” (p. 161). In an attempt to clarify the definition of parental involvement, Jeynes (2012) referenced the United Code of Law, which defined parental involvement as “the participation of parents in regular, two-way, and meaningful communication, involving student learning and other school activities” (as cited by Jeynes, 2012, p. 707). The United Code of Law is prepared and published by the Office of the Law Revision Counsel of the U.S. House of Representatives and contains the general and permanent laws of the United States. The United Code of Law definition appeared in the NCLB’s (2002) description of parental involvement. The definition provided clarity for researchers in the area of parental involvement. For purposes of this study, parental involvement was referred to in the context as defined by the United Code of Law.

**Mandates**

Since the enactment of NCLB in 2002, research has suggested an increase in the amount of parental involvement programs implemented in U.S. schools (Myers & Myers, 2013). Major reform goals included in the federal mandate called for an increase of parental involvement in schools and a decrease in barriers between schools and home (NCLB, 2002). Section 1118 of the act mandated that all schools receiving Title I funds create parental involvement programs in part by creating “covenants” with parents within the school community (NCLB, 2002). The purpose of the covenant, or strong relationship between school and home, is for schools to gather feedback from parents in the effort to foster flexible and meaningful parental involvement.
programs. NCLB (2002) was replaced by the ESSA (2015), which has maintained policies for specific parental involvement.

The ESSA (2015) includes many of the same parental involvement policies outlined in NCLB (2002) such as covenants with school stakeholders. Like NCLB, the ESSA requires Title 1 schools to fund programing designed to increase parental involvement. The ESSA specifies that schools promote two-way communication with parents and provide frequent updates regarding student progress. The ESSA requires that school personnel are trained to communicate effectively with parents and stipulates that involvement strategies are implemented in schools.

State educational departments have complied with federal mandates such as the NCLB (2002) and ESSA (2015) by including parental involvement guidelines for school districts into their policies. An example includes the Ohio Department of Education’s (ODE) recommended roles and responsibilities for supporting school, family, and community partnerships. The ODE recommended that schools develop formal and informal communication channels between school and home. Essential practices have been recommended by the ODE for school leaders “to foster effective communication with families for the purpose of improving student performance” (ODE, 2015). For instance, under House Bill 1 of the Ohio Legislature, the ODE is required to post examples of best practices to help schools improve parental involvement. The ODE has complied in part by listing practices suggested by Epstein (1995, 2001) and the National Parent Teacher Association (2016). The development of “electronic grade booklets so families can frequently monitor their children’s progress” was among the best practices listed on the ODE (2016) website. The ODE’s implementation of the ESSA is indicative of the department’s actions designed to promote parental involvement programs in the state’s schools.
The ESSA (2015), NCLB (2002), and state mandates such as those adopted by the ODE, have been passed and enacted due to the widespread belief that parental involvement yields high academic outcomes for students. Myers and Myers (2013) indicated that parental involvement programs increased between 1996 and 2007 and cited NCLB as the “lever of change” (p. 75) that prompted the increase. Myers and Myers (2013) suggested that the legislation and policies have led to an increased awareness of the benefits of parental involvement in schools. To this end, individual states have adopted federal mandates into their board policies to ensure districts cultivate partnerships between school and home.

**Childhood Education**

Developmentally appropriate methods of parental involvement throughout early childhood education included forms of both academic instruction and academic socialization (Sy, Gottfried & Gottfried, 2013). Reading to children and reviewing numbers were identified as academic instructional parental involvement strategies beneficial to student outcomes (Sy et al., 2013). Academic socialization practices included communicating expectations to children and providing a home environment conducive to learning (Sy et al., 2013). The same authors suggested that academic socialization strategies were beneficial to early childhood students. Benefits included strong academic outcomes through adolescence. On the contrary, Sy et al. (2013) found that while parental instruction had a direct impact on a child’s reading achievement in early childhood, it did not have a relationship with adolescent achievement. To this end, the involvement strategies of parental instruction and academic socialization were both beneficial during childhood, but only academic socialization continued to have a relationship predictive of student achievement during adolescence.
The findings identified by Sy et al. (2013) were somewhat consistent with Froiland, Peterson and Davidson (2012) who also stated that academic socialization benefitted children in both the short- and long-term. However Froiland et al. (2012) differed by suggesting that early parental involvement and parent expectations were longitudinal predictors of academic achievement. For instance, Froiland et al. (2012) found that home literacy involvement in kindergarten helped predict achievement in 8th grade as an indirect result of kindergarten success. Both academic instruction and academic socialization appeared as key parental involvement strategies beneficial to student outcomes. Froiland et al.’s notion that academic instruction and academic socialization were beneficial to student outcomes supported Englund, Luckner, Whaley and Egeland (2004) who suggested that a combination of parent involvement and parental expectations strongly predicts academic outcomes during the early childhood years.

In sum, Sy et al. (2013) and Froiland et al. (2012) have suggested that parental involvement in the early childhood years was beneficial to student outcomes. A blend of academic socialization and academic instruction appeared to be the parental involvement approach most beneficial during childhood. Short-term benefits included achievement in reading and general school readiness (Froiland et al., 2012; Sy et al., 2013). Long-term benefits of parental involvement were predictive of the child’s academic achievement over time (Froiland et al., 2012; Sy et al., 2013). When academic socialization has been used as the parental involvement strategy the predictive relationship to student academic achievement over time is especially true (Froiland et al., 2012; Sy et al., 2013).

**Middle School through Junior High School**

As children progress through early education and enter adolescence, shifts in parental involvement strategies are necessary in order for the practice to remain academically beneficial
for children. For example, academic instruction, such as help with homework, along with at-school parental involvement have been found to be less effective during adolescence (Froiland et al., 2012; Hill & Tyson, 2009). On the contrary, at-home parental involvement and academic socialization approaches remain effective for increased academic achievement for students (Hill & Tyson, 2009; Kaplan-Toren, 2013). During adolescence, a general decline in parental involvement occurs despite suggestions that the involvement of parents remains beneficial to student outcomes throughout this stage of student development (Hill & Tyson, 2009).

The structure of middle schools and the developmental changes that children undergo throughout adolescence were attributed to shifts in parental involvement strategies and contributed to the decline in parental involvement (Hill & Tyson, 2009; Kaplan-Toren, 2013). Middle school structure has been identified as a barrier to parental involvement (Kaplan-Toren, 2013). Hill and Tyson (2009) found that the departmentalization of instruction by academic concepts was a deterrent for effective communication between school and home. The developmental changes that occur throughout adolescence have an impact on parental involvement as well. Cognitively, adolescents form the ability to anticipate results and understand multiple dimensions of decision-making (Keating, 2004). Changes in cognitive development allow adolescents to comprehend decisions related to class choices and overall goals (Hill & Tyson, 2009). Cognitive changes influence the student’s rejection of in-school and academic instructional forms of parental involvement that are effective during childhood.

Deterrents, such as middle school structure and developmental changes in adolescence, may lead parents to erroneously believe that their involvement no longer matters (Kaplan-Toren, 2013). On the contrary, a strong positive relationship between parental involvement and student academic outcomes has been found to exist during middle school (Hill & Tyson, 2009).
Specifically, academic socialization had a strong positive relation to educational achievement in middle school (Hill & Tyson, 2009). According to Hill and Tyson (2009):

> Academic socialization includes parents’ communication of their expectations for achievement and value for education, fostering educational and occupational aspirations in their adolescents, discussing learning strategies with children, and making preparations and plans for the future, including linking material discussed in school with students’ interests and goals. (p. 758)

Hill and Tyson’s (2009) findings related to academic socialization supported Froiland et al. (2012) who suggested that parental expectations at early levels of a child’s education were “longitudinal predictors of academic achievement” (p. 46). More specifically, Froiland et al. (2012) indicated that when parents engaged in academic socialization with their kindergarten children, the practice was predictive of 8th grade student achievement. In sum, the research suggested that academic socialization was a parental involvement practice beneficial at both early stages of a child’s education (Froiland et al., 2012) and continued throughout middle school (Hill & Tyson, 2009).

The practice of academic socialization during middle school is part of a gradual shift away from school-based and academic instruction forms of parental involvement that were more appropriate at earlier levels of a child’s education (Froiland et al., 2012; Hill et al., 2004; Hill & Tyson 2009; Kaplan-Toren, 2013). What’s more, parental forms of involvement appropriate at earlier levels have been found to have an adverse effect on student achievement as a child matures. Hill et al. (2004) explained “increased parent academic involvement in adolescence may conflict with other aspects of adolescent development including the need for autonomy, independence, and detachment from family” (p. 1505). In support of Hill et al., Froiland et al.
(2012) determined that parent involvement with homework and grade checking for their 8th grade children had a slightly negative effect on achievement.

In contrast to findings linking academic socialization to student achievement, parental academic instructional involvement was found to be a less effective approach throughout middle and junior high school. Hill et al. (2004) found no direct relationship between parental 7th grade academic involvement and student achievement. But in the same study, 7th grade parental academic involvement was found to have a negative relationship with 8th grade behavior problems and was positively linked to 11th grade aspirations (Hill et al., 2004). In this case, while beneficial to trajected behavioral outcomes and aspirations, parental involvement approaches in the area of academic instruction were not found to be beneficial to student achievement in junior high. Hill et al.’s (2004) findings supported the need to shift parental involvement approaches at the junior high level in order to remain academically beneficial for students. The use of parental involvement measures more appropriate for elementary school, such as attending PTA meetings was a noteworthy limitation to Hill et al.’s (2004) study. As a result, Hill et al. (2004) stated the need for additional research to design more developmentally appropriate measures of parent academic involvement.

As students move into adolescence, academic socialization continued to be identified as a parental involvement method linked to student academic achievement. Consistent with Hill and Tyson (2009), Kaplan-Toren (2013) found that in junior high school, parental involvement strategies conceptualized as academic socialization (i.e. communicating expectations, purposes, and goals) had a strong relationship with student well-being and academic achievement. Kaplan-Toren’s (2013) finding that parental involvement matters throughout adolescence was also consistent with Hill and Tyson (2009).
**High School Adolescence**

The shift from school-based academic parental involvement to home-based approaches and academic socialization identified in junior high adolescence persisted throughout secondary school. Wang et al. (2014) suggested the shift in parental involvement throughout adolescence is parallel with the natural changes that occur in the context of parent-child relationships. According to Wang et al. (2014), parental involvement is rooted in the parent-adolescent relationship rather than the relationship between the parent and school. While parental involvement shifts throughout adolescence, parental communication with the school declines throughout secondary school (Wang et al., 2014). This decline in communication has been attributed to increased school size, increased numbers of teachers students have, and the overall organizational complexity of middle and secondary schools (Hill & Chao, 2009; Wang et al., 2014). Despite the decline in communication between school and home, Wang et al. (2014) identified a relationship between student outcomes and parental involvement in the forms of providing an atmosphere conducive to student learning at home and engaging in academic socialization with their adolescent (Wang et al., 2014).

Wang et al.’s (2014) identification of academic socialization as an effective form of parental involvement in secondary school is consistent with Jeynes (2012), Wang and Sheikh-Khalil (2014), and Wilder (2014). Wang et al. (2014) found that teenage students were developmentally ready for parental involvement approaches that allow for student autonomy. These same authors measured types of parental involvement including providing structure at home and linking education to future success in adolescent students. The areas of parental involvement measured were associated with increased student GPA and improved behavior in students (Wang et al., 2014). Wang et al.’s findings supported Fan and Chen’s (2001) meta-
analysis examining the relationship between parental involvement and academic achievement. The same authors indicated a relationship between parental aspiration/expectation, i.e. academic socialization, and academic achievement in students. In sum, academic socialization was found to be an effective form of parental involvement for students at the secondary level.

In a separate study involving secondary students, Wang and Sheikh-Khalil (2014) found that parental involvement improved academic and emotional functioning. The same authors conceptualized parental involvement as a multi-dimensional construct by measuring the effects of school involvement, home involvement, and academic socialization. Academic socialization was found to have the strongest positive relationship with student achievement and the strongest negative relationship with depression (Wang & Sheikh-Khalil, 2014). Parents who conveyed the value of education and discussed future plans with their children motivated them to engage in academic work and positively influenced their behaviors (Wang & Sheikh-Khalil, 2014). Additionally, the establishment of a structured and supportive home environment was found to have a positive association with student achievement (Wang & Sheikh-Khalil, 2014).

In contrast, Wang and Sheikh-Khalil (2014) also found that at-school parental involvement activities such as attending parent-teacher conferences and volunteering did not result in achievement gains for high school students. The same authors attribute the lack of student achievement gains for at-school parental involvement strategies to their non-academic nature. For example, at parent-teacher conferences, the focus of discussion is often student misbehavior rather than academic concepts. Wang and Sheikh-Khalil (2014) found that involvement opportunities available for parents in high school were typically non-academic.

On the whole, Wang and Sheikh-Khalil (2014) found home-based academic socialization forms of parental involvement more beneficial to student outcomes than school-based
approaches. The same authors suggested that high school structure and adolescent developmental needs are both more conducive to parental involvement in the form of academic socialization. Wang and Sheikh-Khalil’s (2014) suggestions at the high school level were somewhat similar to Kaplan-Toren (2013) and Hill and Tyson (2009) who suggested academic socialization as age appropriate and beneficial to student academic outcomes at the middle and junior high school levels. Like Wang and Sheikh-Khalil (2014), both Kaplan-Toren (2013) and Hill and Tyson (2009) cited school structure and student developmental needs as reasons for the shift toward academic socialization.

K-12 Summary

Academic socialization is among the parental involvement strategies linked to increased student academic and behavioral outcomes at all levels of K-12 education (Hill et al., 2004; Hill & Tyson, 2009; Kaplan-Torren, 2013; Sy et al., 2013; Wang et al., 2014; Wang & Sheikh-Khabel, 2014). The findings of the aforementioned studies were supported by Jeynes (2012) who found a significant relationship between parental involvement programs and student academic achievement. The analysis indicated that students in grades ranging from pre-kindergarten through grade 12 benefited from their parents’ involvement (Jeynes, 2012). The findings presented by Jeynes (2012) supported the work of Fan and Chen (2001). In a meta-analysis of 25 empirical studies, Fan and Chen (2001) indicated a meaningful relationship between parental involvement and student academic achievement. Both Jeynes (2012) and Fan and Chen (2001) found academic socialization to have the most significant impact on students’ academic success.
College

The benefits of parental involvement have been identified in college students as well (Brueck et al., 2012; Cheng et al., 2012). Brueck et al. (2012) found a positive relationship between parental involvement in high school and academic outcomes in college. A correlation was identified between increased parental involvement in high school and the student’s academic mastery in college. Brueck et al. (2012) concluded “parents who actively support their adolescent’s high school education and academic skill development provide a foundation that frames the adolescent’s academic motivation and success as he or she pursues a collegiate education” (p. 102). To this end, parental involvement for high school students appeared to benefit the same students when they reached college. In a separate study concerning college students, Cheng et al. (2012) suggested parental support remained beneficial to students at the colligate level. According to the same authors, family social support was a predictor of higher GPAs among college students. Family support was measured partially by asking students if family members supported their pursuit of a college degree (Cheng et al., 2012). The concept of family social support at the college level is in alignment with Hill et al.’s (2004) delineation of academic socialization that includes parents conveying the value of education to students.

Barriers to Parental Involvement

Four distinct challenges form barriers to successful parental involvement in schools: (a) low at-school participation for minority groups, (b) low at-school participation among low SES groups, (c) a general decline in parental involvement through adolescence, and (d) lack of teacher training. It is largely the responsibility of school administrators to address each challenge for the purpose of establishing successful parental involvement programs in their schools.
Regardless of the suggestion that all families can benefit from parental involvement (Michael et al., 2007), many ethnic minority members are reluctant to become engaged in at-school parental involvement (Wang et al., 2014). Historically disenfranchised groups such as African Americans and Latinos often find it difficult to establish trusting relationships with school personnel (Park & Holloway, 2013; Wang et al., 2014). Wang et al. (2014) identified a lack of trust, rooted in historical discrimination, as a reason why African American parents are likely to mistrust schools rather than collaborate. Likewise, Latino parents often feel unwelcome and misunderstood when engaging with school personnel (Hein, 2003). Latino families are less likely to communicate with the school especially when English is a second language (Gaetano, 2007). Therefore, it is not surprising that African American and Latino families tend to spend more time engaging in home-based activities with their children than Anglo American parents (Bower & Griffin, 2011; Park & Holloway, 2013).

Similarly, families with low SES were more likely to engage in at-home parental involvement than families with high SES (Park & Holloway, 2013; Walker & Hoover-Dempsey, 2008). In fact, Park and Holloway (2013) reported that higher SES parents were less involved at home than lower SES parents. Multiple barriers for at-school parental involvement have been identified for families with low SES including: inflexible work schedules, unfamiliarity with the school, lack of resources, inadequate transportation, and stress due to living in disadvantaged neighborhoods (Hill & Taylor 2004; Walker & Hoover-Dempsey, 2008; Wang et al., 2014). A barrier such as inadequate transportation may hamper a parent’s ability to attend an at-school event, but may not however deter at-home parental involvement. In sum, the identified barriers to parental involvement indicate factors that deter low SES parents from high levels of involvement at-school, but on the other hand help explain increased levels of at-home
involvement. If a parent cannot attend a school event due to work conflicts or transportation issues, they may choose to engage with their child at home instead.

Despite the aforementioned findings, Green et al. (2007) along with Park and Holloway (2013) have cautioned against parental involvement generalizations based upon ethnicity and SES. Green et al. (2007) noted “SES variables do not directly explain the often large variability found in levels effectiveness of involvement within SES groups” (p. 534). On a similar note, Park and Holloway (2013) warned that ethnic and SES generalizations can be misleading on account of other confounding variables such as language capabilities, non-traditional families, and parental education levels. Notwithstanding, a potential lack of at-school involvement among ethnic groups or families with low SES poses a challenge to school administrators seeking parental involvement programs inclusive to all stakeholders (Gonzales-DeHass, 2005).

Another frequently mentioned barrier found in the literature involved a decline in parental involvement that occurred throughout adolescence (Deslandes, 2001; Gonzales-DeHass, 2005; Green et al., 2007; Hill & Tyson, 2009; Lloyd-Smith & Brown, 2010; Park & Holloway, 2013). Deslandes (2001) stated that parental involvement was highest at the primary level, began to decline around 4th grade, and reached its lowest level in secondary school. Green et al. (2007) supported Deslandes (2001) suggesting a consistent decline in parental involvement as children aged. The explanation for the decline offered by researchers is similar to Hill et al.’s (2004) findings regarding developmentally appropriate forms of involvement. Like Hill et al., (2004), Lloyd-Smith and Baron (2010) suggested that there is a generally less defined role for parents along with a diminished sense of parental efficacy (Deslandes & Bertrand, 2005) in middle and high school. As adolescents reached higher grade levels, parents often felt that their involvement would not be beneficial to student academic outcomes (Deslandes & Bertrand,
Researchers believed that parental sense of efficacy can diminish if parents are unfamiliar or lack the skills to help students with more intensive coursework (Deslandes & Bertrand, 2005). Additional declining factors included: adolescent students seek more autonomy and independence from parents, pursue closer peer relationships, and experience both cognitive and physical developmental changes (Green et al. 2007; Park & Holloway, 2013).

The decline in parental involvement throughout adolescence coincides with a decline in academic achievement for many students (Hill & Tyson, 2009; Wang et al., 2014). Barber and Olsen (2004) explained that transitions to new school buildings, e.g. from a middle school to a junior high school, led to decreased academic performances for some students. Student-perceived lack of teacher support was identified as a factor associated with the decline in achievement (Barber & Olsen, 2004). Barber & Olsen’s (2004) findings were supported by Eccles (2007) who also identified student perceptions regarding transitions to new schools among the cause for declines in academic achievement. The dual decline of parental involvement and student academic achievement present an additional challenge to school administrators who seek strategies that positively influence student academic outcomes.

Another barrier to parental involvement identified by researchers was a lack of training for educators (Walker & Hoover-Dempsey, 2008). Appropriate levels of training for school personnel are important for the success of parental involvement programs (Walker & Hoover-Dempsey, 2008). Gonzales-DeHass (2005) cited lack of teacher preparation as the greatest deterrent to systematic and meaningful parental involvement. Teachers may recognize the importance of parental involvement in schools, but are often reluctant to engage with parents (Walker & Hoover-Dempsey, 2008). Walker and Hoover-Dempsey (2008) found that teachers fear parents might behave negatively or choose not to attend school related programs. Teachers’
own psychological and cultural barriers contribute to their reluctance to inviting parents to participate. Examples of such barriers include a lack of self-confidence, fear of criticism, and lack of knowledge about strategies (Walker & Hoover-Dempsey, 2008). The same authors indicated the aforementioned teacher attitudes revealed a lack of training in successful parental involvement strategies. Supporting Walker and Hoover-Dempsey (2008), Lloyd-Smith and Baron (2010) found few teacher and administrator preparatory programs that focused on successful strategies for parent involvement. While Epstein and Sanders (2006) found that schools, colleges, and departments of education had made progress by doing more to prepare those planning for careers in education, the authors concluded that more still needed to be done to prepare future educators.

The barriers identified here pose a challenge to school administrators who seek effective parental involvement programs in their schools. Researchers have attempted to provide frameworks to help schools (a) understand the motivating factors for parents and (b) identify overlapping spheres of influence needed for schools to establish effective partnerships with families and community. The administrator’s role has been emphasized as a key component to the success of parental involvement.

**Predictors of Parental Involvement: Hoover-Dempsey and Sandler Model**

Researchers have attempted to identify factors that motivate parents to become involved. The HDS model (1997) is one of the most widely cited models for predicting parental involvement behaviors. The HDS model emphasized three main sources of motivation that lead to parental involvement. The first area identified was parental role construction and self-efficacy (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005). The authors explained role construction as personal or shared responsibly for a child’s educational achievement. Self-
efficacy was described as the parent’s view that their involvement will benefit their child (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005). Perceived invitation was the second motivator for parental involvement. Invitations from the school, teachers, and children were found to motivate parents to become involved (Hoover-Dempsey & Sandler, 1997). Life context of the parents was the third area identified and included the amount of time parents can allocate for involvement. The framework provided in the HDS model may assist school administrators with an understanding of what prompts parents to become involved (Green et al., 2007).

Deslandes (2001) supported the HDS model delineation of role construction because it determined the type of activities in which parents chose to engage with their children. For example, the same author stated that parents who believe education should be left entirely up to teachers are not likely to become involved. The parents’ beliefs in this context form their role construction. Separate studies supported the HDS model, finding that role construction was significantly related to parental involvement in a high school setting (Deslandes & Bertrand, 2005; Park & Holloway, 2013).

Park and Holloway (2013) supported all of the principal predictions of the HDS model. Park and Holloway (2013) investigated the utility of the HDS model for predicting parents’ involvement during high school. Parental role construction and school outreach efforts were identified as very strong predictors for parental involvement (Park & Holloway, 2013). Parental self-efficacy was identified as “significant with respect to homework involvement and moderately significant with respect to educational expectations” (p. 116). Similar findings supported the HDS model. Green et al. (2007) suggested parental involvement was predicted by child invitations and parental sense of efficacy. Additionally, Deslandes and Bertrand (2005)
found that parental role construction and parent’s perceptions of teacher invitations predicted the involvement of parents of ninth grade students.

**Parental Involvement: The Epstein Model**

While the HDS model helps administrators gain a better understanding of why parents get involved, the Epstein model provides a framework for how to establish successful partnerships. The goal of the Epstein model is the development of positive and productive interactions between home, school, and community to produce the best results for students (Epstein & Voorhis, 2010). Epstein (2001) suggested that the three most important contexts in which children develop are family, school, and community. Each context may have separate or combined influence on children (Epstein & Voorhis, 2010). Interconnections and overlaps between contexts form the ground for collaboration. Within the areas of overlap between family, school, and community, Epstein (2001) identifies six types of involvement: (a) parenting, (b) communicating, (c) volunteering, (d) learning at home, (e) decision-making, and (f) collaborating with the community. When school administrators focus on the aforementioned areas, they can help all parents become involved in different ways (Epstein, 2007). The types of involvement are broad and involve parents, teachers, and community partners all contributing to student success and learning (Epstein & Voorhis, 2010). Walker and Hoover-Dempsey (2008) support the Epstein model calling it “arguably the most renowned and influential framework guiding educators’ and policy makers’ thinking about parent involvement” (p. 384). More specifically, the framework assists school administrators to think systematically about various ways to involve parents, without excluding or criticizing those who may not be able to participate at school (Epstein and Voorhis, 2010).
Epstein’s pluralistic view of parental involvement is supported by Hill and Tyson (2009), who identified a multifaceted construct of the concept. Fan and Chen (2001) supported this view as well stating that “parental involvement subsumes a wide variety of parental behavior patterns and parenting practices” (p.3). The conceptualization of parental involvement as a multifaceted construct is supported by Knopf and Swick (2008) because it helps school leaders take a flexible approach when accommodating parents. Further, a pluralistic view encourages teachers to shift their paradigm of parental involvement from the school’s terms, to the terms of and needs of parents (Knopf & Swick, 2008).

Rodriguez, Blatz, and Elbaum (2014) supported both the HDS and Epstein models in a study that explored parents’ view of schools’ efforts to get them involved. School collaboration emerged as the most prominent theme reported by parents (Rodriguez et al., 2014). School receptivity to parent input and the extent to which teachers solicited that input were positive indicators of collaboration, whereas negative indicators included “rigid” school practices and lack of school response when parents initiated contact (Rodriguez et al., 2014). In the same study, effective school communications were identified as those that occurred regularly, focused on student progress, and allowed parents a variety of communication methods (Rodriguez et al., 2014).

The HDS model examined the factors that motivate parental involvement including role construction, self-efficacy, and perceived invitations. Rodriguez et al. (2014) reported that some parents became involved “because they considered it their responsibility to be involved in their children’s education” (p. 88). Parents’ perception of their responsibility is an example of the HDS delineation of parental role construction, that is, parents became involved based on their perception of what their role should be in their child’s education.
Partnerships, collaboration, and communication are emphasized in the Epstein model. Rodrquez et al. (2014) supported Epstein as parents indicated the schools’ frequent, varied communication as favorable involvement practices. Parents responded negatively when schools failed to keep them informed of important matters (Rodriquez et al., 2014). In greater support of Epstein’s suggestion for partnerships and collaboration between schools and home, Rodrquez et al. (2014) indicated that parents responded favorably when schools sought their input.

**Student Information Systems**

In efforts to improve involvement programs, many school districts have utilized online grade books also known as Student Information Systems (SIS). PowerSchool is a web-based SIS that supported 15 million students in 73 countries in 2014 (PowerSchool, 2015). Once owned by Apple and Pearson, PowerSchool was acquired by Vista Equity Partners in June 2015. A description of PowerSchool from the developer’s website follows:

PowerSchool includes a powerful gradebook and teacher tools that provides all the features teachers need in one place, making it easy-to-use and learn. All classes, rosters, student demographic information, grading periods, standards, rubrics and grades scales are automatically loaded into the gradebook. All data flows back to the central database in real time, providing all stakeholders, including parents and students, with instant visibility to assignments, scores, grades, comments and progress toward each standard.

(PowerSchool, retrieved 7/6/15)

PowerSchool is used as a communication tool for schools to provide parents with student data in real time. Weinstein (2005) predicted new technologies would transform school-to-home communication. Weinstein (2005) described SIS as web portals that are provided to parents who can log-on to access information about their student’s educational outcomes.
Some school administrators have reported improvements since utilizing SIS. Bird (2006) indicated that student attendance and discipline improved along with test scores since the implementation of SIS. Bird (2006) explained that the district had utilized their SIS to track student progress, maintain parental involvement and provide information more efficiently to parents.

While SIS have been become common in schools throughout the early twenty-first century, very little information regarding the benefits appear in the empirical literature. This is surprising because many researchers have long advocated for improved communication between school and home (Epstein 1995, 2001; Knof & Swick, 2008). Others have promoted the utilization of new technologies to increase parental involvement (Epstein & Voorhis, 2010). Sheldon (2009) examined the effects of family and community involvement on attendance, behavior, and achievement, but made no mention of the role of technology or SIS to measure outcomes.

Summary

The review of the literature has suggested the general benefits of parental involvement in education. The ESSA of 2015 indicates that parental involvement will remain a key component of educational programs in US schools. The literature has suggested both at-home and at-school parental involvement practices and identified academic socialization as a meaningful form of parental involvement at all grade levels. Barriers to parental involvement have been identified such as low at-school participation for minority and low SES groups along with a decline in parental involvement throughout a student’s adolescence. Lack of training for school personnel has been suggested as a factor leading to declines in parental involvement. Frameworks by Hoover-Dempsey and Sander (1997) and Epstein (1995, 2001) suggested practices and strategies.
to promote partnerships between schools, parents, and community members. Increases in technology have led to the development and utilization of student web portals such as PowerSchool. Web portals provide parents with access to their child’s grades and are used as a tool to promote communication between school and home. While both parental involvement programs and technology have increased in schools over the past two decades, it is unknown if a relationship exists between parental access to web portals and student outcomes.
CHAPTER III. METHODOLOGY

Over the past two decades, programs designed to foster parental involvement in schools have increased (Myers & Myers, 2013). The increase in programs can be attributed to mandates (NCLB, 2002) and the reported benefits to students when parents are involved in the educational process (Gonzalez-DeHass et al., 2005; Jeynes, 2012; Meyers & Meyers, 2013). As technology has advanced, many school districts have utilized digital student portals, also known as student information systems (SIS), which parents can access online. Despite the wide use of student portals by school districts, little is known regarding the impact parental access to student portals has on student outcomes. Along the same lines, it is not known how parents utilize the information once accessed.

The purpose of this study was to examine if a relationship existed between parental access to student web portals and student’s academic outcomes. This study examined if parent access to student portals had a significant relationship with student educational outcomes when compared to peers of the same age whose parents did not access their student portals. Educational outcomes measured included student GPA, attendance, and disciplinary infractions in students enrolled in grades 7-12. Secondly, this study asked parents to identify the information they obtained from their student’s web portal how they used their student’s information after they accessed it. Information provided by parents was examined to determine whether other types of parental involvement occurred after accessing their child’s online portal. Specific types of parental involvement examined included contacting teachers, talking to their child, and offering incentives or punishments. In this chapter, the researcher details the quantitative research design by describing the participants, instrumentation, and data collection.
process. Steps taken in the data analysis are also presented along with assumptions made by the researcher while conducting the study.

**Research Questions**

This study addressed the following research questions as they pertained to the relationship between parental access to student online digital portals and student academic outcomes. The study also examined how parents used the information obtained from PowerSchool.

**What relationship does parental access to online student portals have with student GPA, attendance, and behavior?**

H1. Adolescent students whose parents have accessed their PowerSchool portal ten times or more over the course of a school year will have significantly higher GPA, fewer absences, and fewer disciplinary infractions than same-grade students whose parents did not access their PowerSchool portal.

H01. Adolescent students whose parents have accessed their PowerSchool portal ten or more time over the course of a school year will not have significantly higher GPA, fewer absences, and fewer disciplinary infractions than same-grade students whose parents did not access their PowerSchool portal.

**What information do parents seek when accessing online student portals?**

The researcher anticipates that parents of adolescent students seek information regarding student grades more than other information when accessing their students PowerSchool portal. An analysis of descriptive statistics based on survey question 1 will provide insight into examining this research question.
How do parents utilize student information after accessing it from online web portals?

The researcher anticipates that parents most often discuss grades with their adolescent students after accessing their students PowerSchool portal. An analysis of descriptive statistics based on survey questions 2, 3, 4, 5, and 8 will provide insight into examining this research question.

Research Design

This study used the quantitative methods of $t$-tests and simple linear regression. $T$-tests were conducted to determine if students whose parents accessed their PowerSchool portal had higher educational outcomes when compared with peers whose parents did not access their child’s PowerSchool portal. $T$-tests measured student outcomes in the areas of GPA, attendance, and discipline. Analysis of $t$-test data suggested if statistical relationships existed between student outcomes and parental access to student portals. Simple linear regressions were conducted to examine the possibility of predictive relationships between parental access to web portals and student outcomes. Three regressions compared the amount of times parents accessed student web portals with student outcomes in the areas of GPA, attendance, and discipline.

In addition to $t$-tests and simple linear regressions, descriptive statistics were used to summarize the results of a parent survey. A stratified random sample of parents was invited to participate in an online survey. The survey was designed to gather information regarding the information parents accessed and how they used information found in their child’s PowerSchool portal. Survey responses were recorded digitally using Google Forms and statistically analyzed by percentages.
Participants

Participants in the study were selected from a convenience sample from a junior high school and high school, both located in a suburban Ohio school district. Pre-existing student data sets from the 2014-2015 school year were provided to the researcher by the school district. The data sets were recorded in PowerSchool, the web based student portal utilized by the district. A total of 600 student data sets were accessed and analyzed by the researcher. The researcher randomly selected 300 students whose parents accessed PowerSchool and 300 students whose parents did not access PowerSchool. This study concerned parental involvement during adolescence, therefore, the researcher exported data from students in grades 7-12 only.

The researcher invited the same parents who accessed their student’s PowerSchool portal to participate in an online survey. Of the 300 stratified random sample, some parent email addresses were not provided and thus they were not contacted to participate in the survey. Other parents selected to participate had more than one child in the sample of 300, therefore they only participated in the survey one time. Considering the aforementioned factors, a total of 246 parents were invited by email to participate in a 10-question online survey. A total of 81 parents chose to participate in the survey.

While the school district chosen for the study will not be named, relevant demographic information was available to the researcher. The school district reported an average household income of $49,865 annually, which is considered ‘high wealth’ by the Ohio Department of Education. Per pupil expenditures was $9,390 annually and the teacher to student ratio was 17:1 district wide. Of the 315 graduates of the class of 2015, 236 planned on attending a traditional 4-year institution for higher education. The district graduation rate was 94.2% and the ACT composite score was a 23.1.
The district’s single high school had a student population of 1,371 students in grades 9 through 12. 91% of students at the high school were identified as White, non-Hispanic, followed by 3.9% identified as Hispanic, 2.1% multi-race, 1.6% Black, non-Hispanic, and 1.4% Asian or Pacific Islander. 14.6% of students attending the high school had been identified as economically disadvantaged. Similarly, the district’s single junior high school had a student population of 766 students in grades 7 and 8. 91.8% of students at the junior high school were identified as White, non-Hispanic, followed by 4.4% of students identified as Hispanic and 2.0% of students identified as multi-racial. The high school and junior high school had an annual student attendance rate of 94.8% and 96.8% respectively.

The researcher obtained permission to utilize the school district’s data from the district’s superintendent. Conditions for accessing the data set by the school district included restrictions regarding the identification of specific students, families, or the district. Additionally, the researcher was asked to share the survey and communication regarding the survey with the superintendent prior to sending invitations to participate. Subjects invited to participate in the survey received email notification of their rights as participants in the study as established by the University of Findlay’s Institutional Review Board. Completing the survey and submitting answers served as informed consent for participation. Each survey participant was guaranteed anonymity and privacy and they were ensured that the study followed federal regulations.

Instrumentation & Data Sources

The study utilized preexisting student data sets stored digitally in PowerSchool by the participating school district. Within each individual data set, the researcher examined parental access log entries along with student GPA, attendance, and disciplinary record. Given digital files for all students in grades 7-12, the researcher selected 50 students, at random, from each
grade whose parents had accessed PowerSchool a minimum of 10 times over the course of the 2014-15 school year. The amount of 10 log entries was chosen because it was representative of one log entry for each month of the school year. Also, when parents initially setup their PowerSchool accounts, a single parental access log was recorded. The researcher observed that many parents never re-accessed PowerSchool after their initial account setup. Selecting students with 10 or more parental log-ins allowed the researcher omit students whose accounts showed a single parental access point reflective of initial PowerSchool account setup. Students whose parents accessed their accounts less than 10 times were not included in the study. Once 50 students from each grade 7-12 were identified with 10 or more parental access entries, their student number was recorded in a spreadsheet that corresponded with grade level. In addition to the student identification number, the GPA, attendance record, and number of disciplinary infractions were collected for each student.

The researcher used an identical procedure to generate a comparative list of students whose parents did not access their portals. The researcher selected 50 students, at random, from each grade 7-12 whose parents had not accessed their PowerSchool account throughout the 2014-2015 academic year. Once 50 students from each grade 7-12 were identified with no parental access entries, their student number was recorded into a spreadsheet that corresponded with grade level. Additionally, student identification number, GPA, attendance record, and number of disciplinary infractions were collected for each student.

In addition to the pre-existing data sets, a 10-question survey was utilized in this study. The survey was designed by the researcher to gather information from parents who accessed the child’s PowerSchool portal. The survey was created using Google Forms and an email was sent to parents inviting them to participate. Parents who participated followed a hyperlink in the
email that directed them to the start of the survey. All responses were recorded in Google Forms, which proved a statistical break down of responses with percentages, pie charts, and graphs.

**Data Collection Procedures**

Parental log entries recorded throughout the course of the 2014-2015 academic year were examined along with their student’s GPA, number of full day absences, and number of disciplinary infractions. Log entries beginning in August 2014 through June 2015 were included in the study. In August 2015, the researcher was granted permission from the school district to utilize the preexisting data.

The researcher organized student data categorically and organized students by grades 7-12. Students were identified by their school identification number, rather than by name, to ensure anonymity. The researcher did not identify student gender or individual demographic information. Once identified by grade level, students were grouped into one of two categories: a.) those whose parents accessed their PowerSchool portal and b.) those whose parents did not access their PowerSchool portal.

Parental log entries were examined by the researcher from November 2015 through January 2016. The researcher exported parental access data into spreadsheets for students in grades 7-12. Students were selected at random. The researcher identified 100 students from each grade level and divided them into two categories of 50. Each student’s GPA, attendance record and disciplinary infractions were recorded in the spreadsheet. For purpose the of this study, the researcher identified 50 students whose parents had accessed their PowerSchool account a minimum of 10 times as “parent access.” 50 students from each grade, levels 7-12 whose
parents did not access their grades were identified as “non-parent access.” Non-parent access
student GPA, attendance, and discipline were also recorded.

The data collection procedure of “parent access” and “non-parent access” resulted in
students grouped in a total of 12 spreadsheets. Spreadsheets were created for each grade in
levels 7-12. For each grade level, two spreadsheets containing data from 50 students were
created for (a) those students whose parents accessed their PowerSchool portal and (b) those
students whose parents did not access their PowerSchool portal.

Parents who accessed their student’s PowerSchool portal were invited to participate in a
survey. Parent emails were shared with the researcher by the school district. The researcher
selected the parents of the same 50 students for each grade level whose data was used in the first
part of the study. 298 of 300 emails were selected from each student whose parents accessed
PowerSchool a minimum of 10 times throughout the 2014-2015 school year. Two students’
records did not include a parent email. Of the 298, many duplicate emails existed indicating the
parent had more than one child in grades 7-12. 52 duplicate emails were removed from the
original list of 298 leaving the total sample amount mailed 246. Of the 246 original invitations
sent, 10 of the emails failed to deliver. Fail to deliver emails were not resent and removed from
the reminder email list. A total of 236 emails were sent and delivered to inboxes.

A survey invitation email was sent on January 26, 2016. One recipient requested not to
be contacted in the future and was thus removed from the reminder list. The first of two
reminder emails was sent by the researcher on February 2, 2016, one week after the initial email
was sent. A second and final reminder was sent on February 9, 2016.
Data Analysis

Multiple steps were included in the data analysis of this research study. To answer RQ1, the researcher used $t$-tests by grade level and outcome. A total of 18 $t$-tests were used, three for each of the six grades examined with a confidence level less than $p = 0.05$ for a $p$-value cutoff of 0.1. Bonferroni correction was used, which involved dividing the $p$-value cutoff by the number of tests. In this study, a value of $0.1 / 18 = 0.006$ was used as the cutoff for each test. Bonferroni correction allowed for a $p$-value of the test below 0.006, indicating statistically significant differences between each area measured. Regression analysis was used to examine data from parents who have accessed PowerSchool, regardless of grade, by using a regression for GPA, attendance, and discipline. In calculating variances, the independent variables included student outcome and the amount of times parents accessed PowerSchool served as the dependent variable.

To answer RQ2 and RQ3, descriptive statistics were used giving the total number of survey participants. Tables were used to show the relevant survey questions and the percentages for each response. Table 1 summarizes and illustrates the methods and tools used for the data analysis for all three research questions.
Table 1

*Summary of methods and tools used for analysis of data*

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data Sources</th>
<th>Methods of Analysis</th>
<th>Independent Variable</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1</td>
<td>Student data and parental log-in records</td>
<td><em>t</em>-tests and regression analysis</td>
<td>Parental PowerSchool Access</td>
<td>Student GPA, Attendance, and Disciplinary Infractions</td>
</tr>
<tr>
<td>RQ2</td>
<td>Survey question #1</td>
<td>descriptive statistics</td>
<td>Parental PowerSchool Access</td>
<td>responses to survey items</td>
</tr>
<tr>
<td>RQ3</td>
<td>Survey questions #2, 3, 4, 5, 8</td>
<td>descriptive statistics</td>
<td>Parental PowerSchool Access</td>
<td>responses to survey items</td>
</tr>
</tbody>
</table>

**Assumptions**

The researcher assumed that the log entries recorded by PowerSchool were accurate. That is, the researcher assumed PowerSchool software functioned as designed by compiling accurate records of parent access and student outcomes. Further, the researcher assumed that PowerSchool end users such as school personnel entered student data such as grades, attendance, and disciplinary infractions into PowerSchool accurately. Other assumptions made by the researcher related to the survey participants. The researcher assumed that survey participants were student parents as identified by the school district. The researcher also assumed that parents answered survey questions honestly. Additionally, the researcher assumed that Google software functioned properly with the delivery of the survey to participants. Finally, the researcher assumed that the survey instrumentation adequately uncovered themes inherent to the study.
CHAPTER IV. RESULTS

Parental involvement programs have become increasingly common in schools throughout the past two decades (Myers & Myers, 2013). At the same time, technology advancements have allowed schools to utilize online student portals that may be accessed by parents (Bird, 2006). Despite the popularity of student portals such as PowerSchool, it is unknown if a relationship exists between parental access to student portals and positive student outcomes. Further, it is unclear what information parents seek most when accessing student portals and how parents utilize the information once accessed. The present study explored three research questions that examined variables related to parental access to digital student portals.

Characteristics of the Sample

The study’s population was exclusive to the students and the parents of students from a Midwestern suburban school district. The researcher focused on students in grades 7-12 whose total population was nearly 2,100 between a junior high school and high school. The sample representative of the population included a total of 600 students. Pre-existing student data sets from the 2014-15 school year were provided to the researcher by the school district. The researcher selected 100 students at random from each grade level and divided them into two categories of 50. For each level in grades 7-12, the academic outcomes of 50 students whose parents accessed their PowerSchool account were compared with the academic outcomes of 50 students whose parents did not access their PowerSchool account.

In addition to the use of pre-existing data sets, the parents who accessed their student’s PowerSchool portal were invited to participate in an online survey. Survey invitations were distributed by email to the parents of the 300 students who accessed their child’s PowerSchool account. Of the 300-parent sample, some parent email addresses were not provided and thus
they were not contacted to participate in the survey. A total of 81 parents chose to participate in the survey. All parents who participated in the survey resided in the school district. While the specific socio-economic information was not available for participants, the school district reported an average household income of $49,865 annually.

**Instrument Validity and Reliability**

A survey created by the researcher was the instrument used to gather data from the parents who accessed their students’ web portal. The survey was created using Google Forms and reviewed by the researcher’s dissertation committee. Prior to distribution of the survey to the sample population, three individuals who were parents in the school district but otherwise unaffiliated with the study piloted the survey in order to ensure usability, administration, and scoring. No problems were reported in any of the aforementioned areas. The researcher estimated that the survey would take five minutes for the participants to complete. The individuals who participated in the pilot survey confirmed the time estimate of five minutes. In addition to review by the researcher’s committee and pilot testing, a copy of the survey was provided to the participating school district’s superintendent and the University of Findlay’s Institutional Review Board (IRB) for review.

After the survey was reviewed by the researcher’s committee, piloted, and approved by the school superintendent and University of Findlay’s IRB, parents were emailed an invitation to participate in the survey. The survey invitation included clear directions for participants. Participants were also provided with the researcher’s contact information if they had questions or encountered problems. To this end, none of the participants made inquiries or reported problems. The survey remained online for a period of three weeks. Once the three-week period had expired,
the researcher closed the survey and began an analysis of the data. Responses were compiled in Google Forms in real time and each completed survey was available for researcher analysis.

The survey used in the present study included questions related to parental access to their child’s PowerSchool account (see Appendix C). The survey was designed to examine what information parents seek when accessing student portals and how parents utilized the information after accessing it. Four survey items were not used in the final analysis of research questions. Survey items 6, 7, and 9 were omitted because those items did not directly answer the research questions in this study. Survey item 10 was also omitted from the official analysis of the data. Item 10 of the survey asked parents a question that allowed for subjective responses. The responses to item 10 were recorded using Google forms and were categorized, coded, and statistically analyzed by the researcher. Responses to all survey items are presented in the following chapter.

Research Question 1

Does parental access to online student portals have a relationship with student GPA, attendance and behavior? The first research question explored the relationship between parent access to student portals and student outcomes. Student outcomes were measured by GPA, attendance, and documented disciplinary infractions. Student academic outcomes were compared between those students whose parents accessed their PowerSchool web portal and students whose parents did not access the web portal. By comparing the academic outcomes between two groups, the relationship between parental access to online student portals was further explored.

To answer research question one, a total of 18 two-sample t-tests were conducted to compare the mean scores by grade level and outcome. At each grade level (7-12), t-tests
examining the GPA, daily absences, and disciplinary infractions where conducted. Per grade, mean outcomes for 50 students whose parents had accessed their PowerSchool portal 10 times or more were compared to the mean outcomes for 50 students whose parents did not access their PowerSchool portal. For all grade levels, regression analysis was conducted to investigate possible predictive relationships between the amount of times parents accessed their student’s PowerSchool account and student outcomes in the areas of GPA, attendance, and disciplinary infractions.

Due to the high amount of $t$-tests conducted, Bonferroni correction was used. Bonferroni correction had been recommended when a large number of $t$-tests are conducted for the purpose of avoiding type I error (Armstrong, 2014). Armstrong (2014) expanded by stating the Bonferroni correction is commonly used when studying the relationship between variables and to correct error rates with multiple comparisons. Using Bonferroni connection in this study, the researcher set a confidence level of 0.006 as the cutoff for each test. The confidence level was established by setting an overall $p$-value cutoff of 0.1 and then dividing the value by the total number of $t$-tests.

**Summary of each student outcome area**

**GPA.** Across grade levels 7-12, the GPAs of students whose parents accessed their PowerSchool portal did not show a statistical difference when compared to the students whose parents did not access their PowerSchool account. For each grade level 7-12, the $p$-value remained greater than 0.006, and therefore the researcher failed to reject the null hypothesis. A complete summary of the $t$-tests comparing student GPAs is provided in Table 2. Note that the $p$-value remained greater than 0.006 in all areas measured. The results suggest a lack of relationship between parental access to student portals and GPA.
Table 2

Summary of t-tests Comparing GPA between PAS and NPAS in Grades 7-12

<table>
<thead>
<tr>
<th>Grade</th>
<th>PAS M (SD)</th>
<th>NPAS M (SD)</th>
<th>p</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>3.2 (0.753)</td>
<td>3.1 (0.646)</td>
<td>0.082</td>
<td>0.836</td>
</tr>
<tr>
<td>8</td>
<td>3.1 (0.741)</td>
<td>3.0 (0.679)</td>
<td>0.008</td>
<td>-0.364</td>
</tr>
<tr>
<td>9</td>
<td>3.2 (0.762)</td>
<td>3.3 (0.725)</td>
<td>0.618</td>
<td>1.136</td>
</tr>
<tr>
<td>10</td>
<td>3.5 (0.769)</td>
<td>3.4 (0.661)</td>
<td>0.690</td>
<td>-0.530</td>
</tr>
<tr>
<td>11</td>
<td>3.6 (0.686)</td>
<td>3.6 (0.531)</td>
<td>0.580</td>
<td>0.117</td>
</tr>
<tr>
<td>12</td>
<td>3.4 (0.700)</td>
<td>3.7 (0.830)</td>
<td>0.316</td>
<td>1.717</td>
</tr>
</tbody>
</table>

Note. PAS = Parent Access Students. NPAS = Non-Parent Access Students.

Attendance. Across grade levels 7-12, the amount of absences of students whose parents accessed their PowerSchool portal did not show a statistical difference when compared to the students whose parents did not access their PowerSchool account. For each grade level 7-12, the p-value remained greater than 0.006, and therefore the researcher failed to reject the null hypothesis. A complete summary of the t-tests comparing student absences is provided in Table 3. Note that the p-value remained greater than 0.006 in all areas measured. The results suggest a lack of relationship between parental access to student portals and student attendance.
### Table 3

**Summary of t-tests Comparing Days Absent between PAS and NPAS in Grades 7-12**

<table>
<thead>
<tr>
<th>Grade</th>
<th>PAS</th>
<th>NPAS</th>
<th>$p$</th>
<th>$t$-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5.94 (3.998)</td>
<td>6.04 (7.146)</td>
<td>0.083</td>
<td>1.772</td>
</tr>
<tr>
<td>8</td>
<td>6.60 (4.300)</td>
<td>6.98 (4.087)</td>
<td>0.008</td>
<td>2.738</td>
</tr>
<tr>
<td>9</td>
<td>5.94 (5.845)</td>
<td>6.04 (4.861)</td>
<td>0.619</td>
<td>0.501</td>
</tr>
<tr>
<td>10</td>
<td>6.60 (5.845)</td>
<td>6.98 (4.779)</td>
<td>0.691</td>
<td>0.400</td>
</tr>
<tr>
<td>11</td>
<td>5.88 (5.275)</td>
<td>6.58 (5.990)</td>
<td>0.580</td>
<td>0.557</td>
</tr>
<tr>
<td>12</td>
<td>6.04 (4.616)</td>
<td>7.16 (5.456)</td>
<td>0.317</td>
<td>1.011</td>
</tr>
</tbody>
</table>

*Note.* PAS = Parent Access Students. NPAS = Non-Parent Access Students.

**Disciplinary Infractions.** Across grade levels 7-12, the amount of disciplinary infractions of students whose parents accessed their PowerSchool portal did not show a statistical difference when compared to the students whose parents did not access their PowerSchool account. For each grade level 7-12, the $p$-value remained greater than 0.006, and therefore the researcher failed to reject the null hypothesis. A complete summary of the $t$-tests comparing student disciplinary infractions is provided in Table 4. Note that the $p$-value remained greater than 0.006 in all areas measured. The results suggest a lack of relationship between parental access to student portals and student discipline.
Table 4

Summary of t-tests Comparing Disciplinary Infractions between PAS and NPAS in Grades 7-12

<table>
<thead>
<tr>
<th>Grade</th>
<th>M (SD)</th>
<th>p</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PAS</td>
<td>NPAS</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.04 (0.198)</td>
<td>0.04 (0.198)</td>
<td>0.100</td>
</tr>
<tr>
<td>8</td>
<td>0.10 (0.303)</td>
<td>0.08 (0.340)</td>
<td>0.766</td>
</tr>
<tr>
<td>9</td>
<td>0.24 (5.845)</td>
<td>0.22 (4.861)</td>
<td>0.901</td>
</tr>
<tr>
<td>10</td>
<td>0.18 (0.438)</td>
<td>0.28 (0.640)</td>
<td>0.403</td>
</tr>
<tr>
<td>11</td>
<td>0.26 (0.633)</td>
<td>0.36 (0.875)</td>
<td>0.547</td>
</tr>
<tr>
<td>12</td>
<td>0.18 (0.438)</td>
<td>0.12 (0.521)</td>
<td>0.554</td>
</tr>
</tbody>
</table>

Note. PAS = Parent Access Students. NPAS = Non-Parent Access Students.

Regression Analysis for Student Outcomes. A simple linear regression was conducted to examine if a predictive relationship existed between the amount of times parents accessed their student’s PowerSchool portal with student outcomes in the areas of GPA, attendance, and behavior. A regression analysis suggested no predictive relationship existed between the amount of times a parent accessed PowerSchool and student outcomes. In each regression, the p-value remained greater than 0.006 for each student outcome area. Results of the regression analysis are provided in Table 5. Note that the p-value remained greater than 0.006 in all areas measured. In the areas of GPA, attendance, and behavior, the researcher failed to reject the null hypothesis.
Table 5

Results for Analysis of Variance for Parental PowerSchool Access of Student Outcomes

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Slope</th>
<th>SE Slope</th>
<th>Intercept</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>0.514</td>
<td>0.000</td>
<td>3.364</td>
<td>0.375</td>
</tr>
<tr>
<td>Attendance</td>
<td>0.025</td>
<td>0.002</td>
<td>5.591</td>
<td>0.664</td>
</tr>
<tr>
<td>Discipline</td>
<td>0.103</td>
<td>0.000</td>
<td>0.127</td>
<td>0.074</td>
</tr>
</tbody>
</table>

Research Question 2

What information do parents seek when accessing online student portals? The second research question explored the types of information parents seek most often when accessing their student’s web portal. To answer research question two, parents who had accessed their student’s web portal were invited to participate in an online survey. Survey participants were asked to indicate the type of information they sought most often when accessing their student’s web portal.

Results for research question 2. To answer this question, parents who had accessed their child’s PowerSchool account ten or more times throughout the school year were invited to participate in an online survey. These were the parents of the students whose information was used in RQ1. A total of 81 parents responded to the survey. Survey participants were given the following prompt, “When accessing your student’s PowerSchool account, what information do you seek most often?” Participants were given four options to choose from including grades, attendance, discipline log, and other. Results showed that 98.8% of the participants chose “grades” as the information they seek most often. 1.2% of the respondents choose “discipline log” and none of the respondents chose “attendance” or “other.” Results displayed in Figure 1
are reflective of the large percentage of participants who indicated “grades” as the information they seek most often when accessing their child’s PowerSchool portal.

The results of RQ2 suggest that of the 81 participant sample, information pertaining to their student’s grades were sought most often by parents when accessing their child’s PowerSchool account.

**Research Question 3**

**How do parents utilize student information after accessing it from online web portals?** The third research question explored the actions that parents took after accessing their student’s web portal. To answer research question three, parents who had accessed their student’s web portal where invited to participate in an online survey. Survey respondents were asked if they took action after accessing their student’s web portal. Respondents were asked about actions related to parental involvement in education including addressing their child or
contacting their child’s teachers. Parental responses to the survey provided insight related to the actions they take after accessing their child’s web portal.

**Results for research question 3.** The first survey question related to RQ3 stated, “After accessing your student’s PowerSchool account, do you address your child in some way?” This question offered respondents to answer by choosing one of the following: “Yes, always,” “Yes, sometimes,” and “No.” The following is a breakdown of how the respondents answered: 44.4% of respondents answered “Yes, always,” 54.3% or respondents answered “Yes, sometimes,” and 1.2% of respondents answered “No.” Results displayed in Figure 2 are reflective of the large percentage of participants who indicated that they always or sometimes address their child after accessing their child’s PowerSchool portal.

![Survey responses related to parent actions after accessing PowerSchool.](image)

The second survey item related to RQ3 stated, “If you address your child after accessing their PowerSchool account, please check all that apply.” Participants could choose from seven options. “I have a conversation with my child about the importance of grades,” was selected by
72.5% of respondents. “I encourage my child to succeed,” was selected by 72.5% of respondents, “I ask my child if he/she needs help,” was also chosen by 72.5% of respondents, “I reward my child based on the information,” was chosen by 40% of respondents, “I punish my child based on the information,” was selected by 16.3% of respondents, “I ask for clarification” was indicated by 70% of respondents, and “Other,” was chosen by 6.3% of respondents. Results displayed in Figure 3 reflect how survey participants address their children after accessing their child’s PowerSchool portal.

The third survey question related to RQ3 stated, “Have you contacted your son or daughter’s teacher after obtaining information from your child’s online grade book?” Respondents could answer by indicating “yes” or “no.” 55.6% of respondents choose “yes” and 44.4% chose “no” when replying to this question. Results displayed in Figure 4 are reflective of
the percentage of participants who indicated that they have contacted their child’s teacher after accessing their child’s PowerSchool portal.

The fourth survey item related to RQ3 stated, “If you have contacted your child’s teacher after obtaining information from your child’s online grade book, please select the statements below that are true.” Respondents were provided with six options for this survey item. “I asked the teacher for clarification regarding one of my child’s grades,” was chosen by 83% of respondents, “I requested a conference with my child’s teacher” was chosen by 36% of respondents, “I asked for advice regarding how to help my child succeed in their class” was chosen by 59.6% of respondents, “I asked about my child’s behavior in the classroom” was chosen by 14.9% of respondents, “I requested the teacher contact me in the future regarding my child’s academic progress” was chosen by 29.8% of respondents, and “Other” was chosen by 10.6% of respondents. Results displayed in Figure 5 reflect how survey participants addressed their children’s teachers after accessing their child’s PowerSchool portal.
The fifth survey question related to RQ3 stated, “After accessing your child’s PowerSchool account, do you offer to help your child with school work at home?” Respondents were given two options, “yes” or “no.” 86.3% of respondents chose “yes,” 13.7% of respondents chose “no.” Results displayed in Figure 6 are reflective of the percentage of participants who indicated that they have contacted their child’s teacher after accessing their child’s PowerSchool portal.
Results from survey items 6, 7, 9, and 10.

Survey items 6, 7, 9, and 10 were not included in the analysis of research questions. While survey items 6, 7, 9, and 10 were designed to examine parental involvement in adolescent education, the survey items did not directly answer the research questions of this study. The responses do however relate to the parental access to PowerSchool. For this purpose, the results of survey items 6, 7, 9, and 10 are presented below.

The sixth survey question stated, “How often do you speak to your child regarding the importance of education?” Participants were given five options to choose from including almost daily, about once a week, about once every two weeks, about once monthly, and never. Results showed that 43.2% of the participants chose “almost daily” followed by “about once a week” which was chosen by 30.9% of respondents. 13.6% of the respondents chose “about once every two weeks” and 11.1% of participants chose “about once monthly.” 1.2% of the respondents
indicated that they “never” speak to their child regarding the importance of education. Results displayed in Figure 7 are reflective of the percentage of participants who responded to survey question six.

The seventh survey question stated, “Do you believe that accessing your child’s online grade book is a form of parental involvement?” Respondents could answer by indicating “yes” or “no.” 97.7% of respondents choose “yes” and 2.5% chose “no” when replying to this question. Results displayed in Figure 8 are reflective of the percentage of participants who indicated that they believed accessing their student’s PowerSchool account was a form of parental involvement.
The ninth survey question stated, “Do you believe that your access to your child’s online grade book has helped you stay involved in their education?” Respondents could answer by indicating “yes” or “no.” 92.6% of respondents choose “yes” and 7.4% chose “no” when replying to this question. Results displayed in Figure 8 are reflective of the percentage of participants who indicated that they believed accessing their student’s PowerSchool account helped them stay involved in their child’s education.
The tenth item on the survey stated, “Please describe the factors that motivate you to access your child’s PowerSchool account.” Respondents answered the open-ended survey item however they chose. Of the 81 parents who participated in the survey, 52 responded to item 10. Like items 1-9, responses for survey item 10 were compiled in Google Sheets. The researcher coded each response and counted the frequency of each theme. Based on the parental responses to survey item 10, the researcher identified the following themes: stay informed, grades, expectations, other, assistance, and convenience.

Twenty respondents to survey question 10 indicated that they accessed their student’s portal because they wanted to stay informed of school progress. Examples of two parent responses coded as “stay informed” included, “I want to be informed pretty much daily of the ongoing progress in her classes. I don't want to be in the dark or caught by surprise” and “I check PowerSchool because I like to see how well they are doing.” Thirteen respondents indicated that grades were the factor that motivated them to access PowerSchool. Examples of
two responses in coded as “grades” included, “To gain/maintain knowledge of students' grades” and “I want to stay informed of their grades.” Seven parent respondents to survey question 10 indicated that expectations were the motivating factor that led to their PowerSchool access. Examples of two responses coded as “expectations” included, “making sure they are where they need to be and doing what they should be doing and to be sure she is staying on track.”

Responses coded as “other” by the researcher did not provide an answer to survey question 10 that described a motivating factor. Rather, responses “coded” as other included suggestions such as, “I would like to see GPA on it” or statements such as “the schools have pretty much forced the parents into this way of checking their child’s progress in school since very few papers are ever sent home to be viewed by the parent.” Assistance and convenience were the final categories coded by the researcher. Three parents indicated that assistance was the motivating factor that led them to access PowerSchool. An example of a response coded as “assistance” included, “I want to make sure my child doesn’t need any assistance.” Two parents indicated that convenience was the factor that motivated them to access PowerSchool. An example of a response coded as “convenience” included, “It is very easy to check their PS account so that is one factor that motivates me.” Figure 9 provides a numeric summary of each coded theme.
Summary

For RQ1, \( t \)-test results suggest that there was no significant difference in the academic outcomes as measured by GPA, daily attendance, and disciplinary infractions between students in grades 7-12 whose parents accessed their PowerSchool portals when compared with peers whose parents did not access their portal. Further, results of the simple linear regression indicated that no predictive relationship existed between the amount of times parents accessed their student’s PowerSchool portal with student outcomes in the areas of GPA, attendance, and behavior.

Survey results related to RQ2 showed that parents who accessed student PowerSchool portals checked grades most often. Results showed that 98.8\% of the parents who participated in the survey chose “grades” as the information they seek most often when given choices between “grades,” “attendance,” “discipline records,” or “other.”
For RQ3, survey results suggested that a majority of parents address their child in some way after accessing their PowerSchool portal. To this end, parents indicated that conversations with their child, encouragement, and asking their child if help is needed were among the highest percentages of interactions parents had with their children after accessing PowerSchool portals. Survey responses also indicated that a majority of parents who check their children’s PowerSchool portal are likely to contact their student’s teachers to ask for grade clarification or to seek advice regarding the best way to help their child. Finally, the survey results indicated that a majority of parents offer to help their child with schoolwork after accessing their PowerSchool portal.
CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS

For the past two decades, the amount of parental involvement programs in US schools has increased (Meyers & Meyers, 2013). The increase of parental involvement initiatives can be attributed largely to legislative requirements for schools (ESSA, 2015) and the reported benefits for students throughout all stages of their education (Wilder, 2014). Despite the reported benefits of parental involvement at all grade levels, the practice has been reported to decline when students enter adolescence (Green et al., 2007; Hill & Tyson, 2009). The decline in parental involvement through junior high school and high school poses a challenge to educators who are required to develop parental involvement programs in their schools.

Educators have utilized technology in attempt to keep parents involved with the education of their children. Digital student portals, such as PowerSchool, provide parents with the ability to access their student’s educational information at any time (Weinstein, 2005). School districts have used student portals to foster parental involvement by increasing communication between school and home. Digital student portals allow parents to access their student’s relevant information such as academic performance, attendance, and disciplinary infractions (Bird, 2006). Despite the convenience and utilization of web portals by parents and schools, it is unknown if a relationship exists between parental access to student web portals and student achievement. Further, little is known regarding what information parents access most or how parents utilize student information upon accessing it. The present study was developed to examine if a relationship existed between parental access to student portals and student achievement. The study also examined the types of student information parents accessed most and how parents utilized the information obtained from their student’s portal.
**Review of the Study**

The quantitative study was designed to compare the GPA, attendance, and disciplinary infractions of students whose parents accessed their portals throughout the school year with peers in the same grades whose parents did not access their portal. The researcher utilized pre-existing data, compiled throughout the 2014-2015 school year, from the portals of 600 students in grades 7-12. Due to the number of data sets used, the researcher chose quantitative methods for this study. For each grade level, *t*-tests were conducted to compare the achievement of students whose parents accessed their portals with students whose parents did not access their portals. No significant differences were found between the two groups of students when comparing GPA, daily attendance, or disciplinary infractions. Further, regression analyses were conducted to examine if a relationship existed between the amount of times parents accessed student portals and student outcomes. No significant relationship was found to exist between the amount of times parents accessed their student’s portal and student performance.

The study also included a survey designed to examine what information parents accessed most when logging onto their student’s portal and how parents utilized such information. 81 parents who accessed their child’s portal participated in an online survey developed by the researcher. Descriptive statistics were used to analyze the results of the parent survey. Survey participants indicated that they accessed grades most often when accessing their student’s portal. Participants in the survey reported to engage in communication related to academic socialization with their student and often initiated communication with teachers after accessing their student’s portal.

Conceptual models developed by Hoover-Dempsey and Sandler (1997) and Epstein (1995, 2001) provided theoretical framework for the study. Hoover-Dempsey and Sandler
(1997) examined constructs that influenced parents to become involved in the educational process of their children. Three main psychological factors that influenced parental involvement in their student’s education were identified: (a) parent’s personal role construction and self-efficacy, (b) perceived invitation, and (c) life context as the primary constructs that influenced parental involvement in their child’s education (Hoover-Dempsey, 1997). Epstein (1995, 2001) provided a second theoretical model for the study. Epstein’s model for parental involvement indicated overlapping spheres where partnerships formed between schools, families, and the community. Epstein (2001) also outlined six types of family involvement behaviors that occur within the partnership: (a) parenting, (b) communicating, (c) volunteering, (d) learning at home, (e) decision-making, and (f) collaborating with the community. Framework by Hoover-Dempsey and Sandler (1997) and Epstein (1995, 2001) provided structure for and influenced the research questions related to parental involvement in the digital age.

**Discussion**

*Does parental access to online student portals have a relationship with student GPA, attendance and behavior?* The researcher hypothesized that adolescent students whose parents had accessed their PowerSchool portal over the course of a school year would have significantly higher GPAs, fewer absences, and fewer disciplinary infractions than same grade students whose parents did not access their PowerSchool portal. The results of the t-tests in each area examined for student grades levels 7-12 suggested that no significant relationship existed in the areas analyzed. Regression analysis that examined the frequency of parental access to student portals with student achievement also suggested that no significant relationship existed. Thus, the researcher failed to reject the null hypothesis for RQ1.
Development of RQ1. The development of RQ1 was primarily influenced by: (1) the mandated requirements for educators to develop parental involvement programs in their schools (ESSA, 2015), (2) the suggestion that parental involvement had a positive relationship with student success (Michael et al., 2007; Wilder, 2014), and (3) the reported decline of parental involvement throughout adolescence (Chen & Gregory, 2009; Hill & Tyson, 2009; Hoover-Dempsey & Sandler, 1997). The following paragraphs detail how each area influenced the formation of RQ1.

Federal legislation and state mandates have required educators to develop parental involvement programs in their schools. Myers and Myers (2013) referred to the NCLB as the “lever of change” that prompted the increase of parental involvement programs in US schools (p. 75). The NCLB (2002) required schools receiving Title 1 funds to develop covenants with district stakeholders. The covenants were to function as a relationship between schools and parents with open lines of communication and collaborative decision-making. The ESSA (2015), which replaced the NCLB, continues the covenant requirement and requires schools review their parental involvement strategies annually. Moreover, state organizations such as Ohio Department of Education recommend schools to pursue communication channels with students’ parents (ODE, 2015). To this end, the researcher chose to examine if the use of student portals, a specific strategy used by educators to promote parental involvement, had a relationship to student achievement. The researcher hypothesized that a significant relationship existed between student achievement and parental access to student web portals.

A second influencing factor that led to the researcher’s hypothesis was the suggestion that parental involvement had a positive relationship with student success. Parental involvement was highly associated with improvements in student achievement, attendance, and school
programs regardless of cultural background, education, or socioeconomics (Michael et al., 2007). The benefits of parental involvement were reported at all grade levels including adolescence. During adolescence, parental support promoted academic mastery and influenced children beyond the immediate future (Brueck et al., 2012). According to Hill and Tyson (2009), during adolescence parental involvement assisted in conveying achievement expectations, the value of education, and positive learning strategies. Moreover, when parents were involved in high school, students achieved higher grades, indicated higher aspirations, and had fewer disciplinary problems (Deslandes, 2005). The aforementioned findings influenced the researcher to hypothesize that parental involvement in the form of access to student web portals would have a significant relationship with student achievement for adolescent students in grades 7-12.

A third influencing component to the researcher’s hypothesis and development of RQ1 was the reported decline in parental involvement in the education of their adolescent students. Hill and Tyson (2009) as well as Hoover-Dempsey et al. (2005) indicated that the decline at higher grade levels was linked to a lack of self-efficacy among parents related to the complexity of their student’s school assignments. A greater sense of independence often desired by adolescents was another factor linked to the decline in parental involvement during this stage of education (Hill & Tyson, 2009). Upon reviewing the reported decline of parental involvement during adolescence, the researcher developed RQ1, in part, to gain insight into the practice of parental access to the web portals of their adolescent students. The researcher sought to examine if a specific strategy for parental involvement, in this case access to student portals, had relationship with student GPA, attendance, and disciplinary infractions. To this end, the purpose of RQ1 was to provide educators with data related to parental access to student portals. Ideally,
educators could consider the outcome of RQ1 when developing parental involvement strategies for adolescent students.

*Possible explanations for the findings.* Despite the reported benefits of parental involvement found in the literature, the researcher found no statistical relationship between parental access to student web portals and student achievement as measured by GPA, attendance, and behavior. The results are perhaps surprising if examined within the *general* context that parental involvement is beneficial to students. However the results of the study align with existing literature that investigated *specific* age-appropriate forms of parental involvement for adolescent students. Each possible explanation of the results of RQ1 is explored in the following paragraphs.

The practice of parental access to their student’s web portal aligns with strategies recommended by the Ohio Department of Education for parent involvement in schools (ODE, 2016). For example, flexible strategies that considered the work schedules and life context of parents were recommended for schools (Comer & Hayes, 1991). Student web portals that parents have the ability to access at any time are arguably flexible and conducive for parental use. Further, a school’s use of student portals such as PowerSchool is a contextually focused strategy for parental involvement. That is, the use of student portals by schools is an official component of the educational program geared to foster communication with stakeholders rather than an accidental or whimsical practice (Epstein & Voorhis, 2010). Moreover, student web portals offered access and information to all parents as recommended by Epstein and Voorhis (2010), rather than just small groups of parents. Yet, the aforementioned suggestions for contextually focused and flexible parental involvement strategies for schools were general recommendations for parental programs in broad multifaceted contexts. For example, Epstein’s
(1995, 2001) model for effective parental involvement in schools described an interconnection and overlap between family, school, and community inclusive of six types of family involvement behaviors encompassing: (a) parenting, (b) communicating, (c) volunteering, (d) learning at home, (e) decision-making, and (f) collaborating with the community. While Epstein (2001) identified broad components for successful parental involvement, the present study examined a specific strategy with a much narrower scope. The specific parental involvement strategy of parental use of PowerSchool does not measure or account for a broader collaborative relationship among stakeholders within the school community. Therefore, it is not surprising that the results of RQ1 contrasted with the general or broad based literature related to parental involvement programs.

When examined with a narrower scope, the results of RQ1 supported existing literature related to specific forms of parental involvement beneficial for adolescent students. To this end, Froiland et al. (2012) found that academic forms of parental involvement and grade checking were not beneficial to student academic outcomes for adolescent students. In fact, Froiland et al. (2012) suggested that while parental expectations communicated to students remained vital for positive student outcomes, forms of parental involvement such as helping with homework and grade checking slightly “backfired” with adolescent students (p. 46). Froiland et al.’s (2012) assertion supported Hill et al. (2004) who indicated that academic parental involvement strategies applied during a student’s adolescence may conflict with aspects of student development including the need for greater autonomy and independence. The results of RQ1 suggested that no relationship existed between parental access to their adolescent student’s portal and student performance. While no decline in student outcomes where found, the aforementioned lack of relationship supported Froiland et al.’s (2012) and Hill et al.’s (2004)
findings that academic parental involvement strategies such as grade checking may conflict with the developmental stage of adolescence.

**What information do parents seek when accessing online student portals?** The researcher anticipated that parents of adolescents seek information regarding grades more than other information when accessing their adolescent student’s PowerSchool portal. The survey results indicated that parents accessed grade information more than other available information from their adolescent’s portal.

**Development of RQ2.** RQ2 shared the factors that influenced the development of the first research question. Like RQ1, mandates requiring schools to develop parental involvement programs, the reported benefits of parental involvement, and the decline in parental involvement reported during adolescence, all influenced the formation of RQ2. Additionally, the researcher drew heavily upon personal experience as an educator when forming the second research question.

Although no data regarding the information parents seek most when accessing their student’s portal was available throughout the development of RQ2, the researcher expected that parents accessed grade information based upon personal experience in the field. The researcher had previously served as both a classroom instructor and a school administrator of adolescent students. The researcher’s duties as a classroom teacher included entering student grade data into student portals. At the time, parents often contacted the researcher regarding student grades after grades were posted to web portals. While serving as administrator, the researcher’s duties included reviewing student attendance data and entering disciplinary data into student portals. Parents rarely contacted the researcher regarding student attendance or disciplinary data after it was entered into student web portals. Field experience led the researcher to expect that parents
accessed grade data most when accessing student portals. To this end, the purpose of RQ2 was to provide educators with data related to parental access to student portals. Ideally, the outcome of RQ2 could be considered by educators when developing strategies for parental involvement in schools during adolescence, a time in which such involvement reportedly declined.

**Possible explanations for the findings.** When parents were given the prompt in survey question 1, “When accessing your student’s PowerSchool account, what information do you seek most often?” 98.8% indicated that “grades” were accessed most often. Only 1.2% of parents indicated that they accessed their child’s “discipline log” and none indicated that they accessed “attendance” or “Other” information from their student’s portal. Supportive of the results of survey item 1, a response to item 10 suggested that parents, “just want to make sure their grades are staying up where they should be, instead of scrambling last minute before report cards come out, to get them back up.” The results of RQ2 can be explained further based on school communication practices related to student grades, attendance, and disciplinary infractions. The researcher again draws from teaching and administrator experience to offer an explanation for the results of RQ2.

The researcher worked in schools that communicated with parents directly when students were absent from school or when students had major disciplinary infractions. Section 109.65(D) of Ohio Revised Code (2016) requires schools to notify parents if their student is absent from school. In many cases, school personnel notified parents by telephone if a student had not reported to school on the day of the absence. Also, schools often required the parents of absent students to contact the school to report absences. Further, school attendance policies required a parent note upon a student’s return to school following an absence. School communication procedures such as parent notification when a student was absent or requiring parents to report
student absence is a possible explanation for why parents did not seek attendance information often from student portals. In this case, parents would be aware of their student’s absence and not have to seek attendance related information from PowerSchool.

Along the same lines, schools often contacted parents directly when major disciplinary infractions occurred. Based on the researcher’s experience as an assistant principal, parents were informed when their student’s disciplinary infraction warranted the removal from school. For example, parents were contacted by an administrator if their student was suspended from school. Similar to attendance communication procedures, schools often informed parents directly when disciplinary offenses occurred. Direct communication by the school to parents may have eliminated the need for parents to access disciplinary records from PowerSchool.

Unlike attendance and disciplinary communication practices used by schools, it was uncommon for teachers to contact parents directly after student assessments were graded. Rather, teachers submitted student grades directly into student portals. Parents have the ability to access student grades and may choose to do so after an assessment to learn how their child performed. Due to the practice of teachers utilizing PowerSchool in this manner, parents are more likely to access grades from their student’s portal more often than other information pertaining to attendance or discipline.

**How do parents utilize student information after accessing it from online student portals?** The researcher anticipated that parents often discussed grades with their adolescent students after accessing their student’s PowerSchool portal. The survey results indicated that parents engaged in discussions pertaining to grades after accessing their child’s portal. Additionally, the survey results indicated that parents engaged in academic socialization, communicated with teachers, and participated in forms of academic parental involvement.
**Development of RQ3.** RQ3 shared the factors that influenced the development of the research questions one and two. Like RQ1 and RQ2, mandates requiring schools to develop parental involvement programs, the reported benefits of parental involvement, and the decline in parental involvement reported during adolescence, all influenced the formation of RQ3. Additionally, the researcher drew from the literature that suggested academic socialization was among the most beneficial forms of parental involvement for adolescent students.

While forms of parental involvement such as academic instructional involvement practices became less beneficial for adolescent students, academic socialization approaches remained effective for increased academic achievement (Hill & Tyson, 2009; Kaplan-Toren, 2013). Hill and Tyson (2009) suggested that academic socialization was both age appropriate and beneficial to student academic outcomes for adolescent students. Supporting Hill and Tyson (2009), Kaplan-Toren (2013) suggested that in junior high school, academic socialization strategies for parental involvement were beneficial to academic achievement and student well-being. Further, according to Wang and Sheikh-Khalil (2014), academic socialization forms of parental involvement where found beneficial as students entered their teens while school-based approaches were not.

The reported benefits of academic socialization parental involvement techniques during junior high and high school influenced the researcher to examine if parents who accessed their student’s portal engaged in forms of academic socialization after accessing the portal. RQ3 was developed to gather information related to how parents used the information after accessing it from their student’s portal. The researcher hypothesized that parents often discussed grades with their adolescent students, i.e., engaged in a form of academic socialization after accessing their
student’s PowerSchool portal. Five survey questions were designed to gather information to answer RQ3.

**Possible explanations for the findings.** Survey outcomes related to RQ3 suggested that parents often addressed their adolescents after accessing PowerSchool. Specifically, survey question 2 asked parents if they addressed their adolescents in “some way” after accessing their student’s PowerSchool account. Responses to survey question 2 indicated that 44.4% of parents answered “Yes, always,” 54.3% of parents answered “Yes, sometimes,” while only 1.2% of parents answered “No.” While the results to the aforementioned question did not specify how parents addressed their adolescent student, it was clear that a majority of parents addressed their adolescent after accessing their portal.

A second survey question related to RQ3 examined how parents addressed their adolescent after accessing their PowerSchool account. Results to survey question 3 suggested that a majority of parents had interactions with their adolescents that included either academic socialization or academic involvement after accessing PowerSchool accounts. When given the survey prompt, “If you address your child after accessing their PowerSchool account, please check all that apply” participants chose from seven options. The options selected by the highest percentages of parents are noteworthy. Two options closely related to academic socialization were selected by 72.5% of respondents including “I have a conversation with my child about the importance of grades,” and “I encourage my child to succeed.” The response, “I ask my child if he/she needs help,” was chosen by 72.5% of respondents and is aligned with academic instructional involvement.

Responses from survey item 10 provided further insight into academic socialization and academic instructional involvement. One respondent shared that they “Check in after tests,
important events (speeches/projects), mid terms, [sic] finals. It sparks good conversation about what my kids are learning in each class, what the expectations are and general discussion about school.” The response indicated components of academic socialization including discussions about expectations and conversations about school. Two other responses to survey item 10 indicated parental assistance, possibly in the form of instructional involvement, after checking PowerSchool. One parent responded, “I want to be sure they are succeeding in their education and help them if needed.” Another stated that checking PowerSchool, “keeps me involved if they are having issues so that I can help faster.” Both the aforementioned quotes suggest that parents help their children after checking grades, which is associated with academic instructional parental involvement.

The results of survey question 3 and responses from survey item 10 are noteworthy because academic socialization has been found to benefit adolescent students (Kaplan-Toren, 2013; Wang et al., 2014) while academic instructional parental involvement has not (Froiland et al., 2012; Hill et al., 2004). The results of the survey suggested that some parents engaged in an involvement practice beneficial to student outcomes while others participated in involvement practices that were not found to benefit adolescent students. The outcome is interesting considering the results of RQ1 that suggested that parental access to student web portals had no significant relationship to student outcomes. It is plausible that due to parental engagement in practices that benefit, have no benefit, or in some cases had adverse effects on student outcomes (Froiland et al., 2012) parental access to student portals had no relationship with student outcomes when compared to peers whose parents did not access their portals. In this sample, parents who accessed student portals engaged in academic socialization and instructional involvement when addressing their students. It is plausible that the parents’ involvement actions
counter balanced each other leading to no significant relationship to parental access to student portals.

Survey question 8 also related to RQ3. Survey question 8 stated, “After accessing your child’s PowerSchool account, do you offer to help your child with school work at home?” Respondents were given two options, “yes” or “no.” 86.3 % of respondents chose “yes,” 13.7% of respondents chose “no.” The results of survey question 8 suggest that parents in the sample are engaging in academic instructional forms of parental involvement at home with their adolescent students. Like the results of survey question 3, the outcome of survey question 8 is noteworthy because academic instructional parental involvement was not identified as beneficial and in some cases was harmful to adolescent student achievement (Froiland et al., 2012; Hill et al., 2004). The results for survey question 8 were similar to the results found for survey question 3, that is, parents engaged in involvement practices that have not been suggested as beneficial for adolescent students.

Like survey question 3, the results from survey question 8 indicated that parents engaged in academic instructional forms of involvement. The results of survey question 8 are consistent with the findings of survey question 3 and likewise support the researcher’s aforementioned argument related the results of RQ1. Parents engaged in forms of involvement that had no positive relationship to student achievement and in some cases hampered student achievement (Froiland et al., 2012). The results of survey question 8 provided another example of parents engaging in forms of involvement that were not found to be beneficial for adolescent students.

Survey items 4 and 5 related to RQ3 by asking parents if they had contacted their adolescent’s teacher after accessing PowerSchool. The results indicated that a majority (55.6%) of parents have communicated with teachers after accessing their student’s PowerSchool
Survey item 5 asked parents to specify the type of contact they made with teachers by choosing from six options. Among the most popular response choices was “Asked the teacher for clarification regarding one of my child’s grades.” Another popular response indicated by parents was “I asked for advice regarding how to help my child succeed in their class.” The results from RQ3 support Bird (2006) who reported that SIS could foster greater communication between school and home. Both survey items 4 and 5 indicated that parents frequently contacted teachers for grade clarification or made inquiries regarding how they could help their children.

Responses to survey item 10 revealed more specific information regarding how parents contact teachers. One parent indicated that after accessing PowerSchool and finding grades below their expectations, the parent would schedule a conference with the teacher. The parent explained,

…I have talked with both of my children since they were little regarding the importance of doing well in school and I continue to talk about accountability and responsibility with regards to education and character. It is up to them to follow through and they have to want to succeed more than I want them too [sīc]. My students know that if I see a poor grade I will schedule a conference with a teacher and the three of us will sit together to get them back on track.

The parent’s response not only illustrated the parent arranging a meeting with a teacher, but indicated strategies of academic socialization by discussing the importance of grades with their student. The response above summarized the steps taken by a parent when contacting a teacher after accessing the PowerSchool. Another parental response indicated that they have used PowerSchool as a tool for working with teachers. The parent responded “My daughter struggles with school and grades. PowerSchool has been a vital tool helping me to keep on top of her
homework, work with the teachers, and get her the help she needs to succeed academically.”
The response suggests that the parent worked with teachers after checking PowerSchool. The parent’s response also suggests academic parental involvement which was consistent with the results of survey items 3 and 8.

**Conclusion**

Based on the results of this study, the researcher concluded parental access to student portals did not have a relationship with increased student performance. While no relationship was found for increased student performance, results did not indicate a negative impact on student performance when parents accessed the PowerSchool accounts of their adolescent students. Upon analyzing parent survey responses, it became clear that parents seek grade information most often when accessing student accounts. Further, parent respondents in the survey suggested that they address their adolescents and often contact teachers after accessing PowerSchool. In this case, the use of PowerSchool appeared to foster communication between schools and parents, and prompted parents to engage with their students. Upon review of the outcomes of this study, the researcher concluded that PowerSchool may be used by schools to foster communication with parents, but should not be considered as a replacement for wider parental involvement initiatives.

**Recommendations**

The researcher has made four recommendations based on the results of this study. Outcomes of the parental survey indicated that parents often seek grades when accessing PowerSchool. Further, after accessing PowerSchool parents often engaged with their adolescent students and often contacted teachers. The results of the study also indicated that no relationship existed between the parental access to student web portals and student outcomes when measured
by GPA, attendance, and discipline. Based on the aforementioned findings, the researcher has made following four recommendations.

1). The results suggested that parents seek grade information most when accessing student portals. This result provides educators with a clear understanding of the information that parents seek when accessing student portals. With this understanding, educators can plan accordingly when entering grades into student portals. Educators utilizing student portals may wish to notify parents when grades are entered via email or utilize SIS settings that send parents alerts via text message when grades are entered. Email or text alerts may assist to inform parents when their student’s grade information has been updated and eliminate the need for parents to check and recheck portals that have not been updated.

2). The results also suggested that upon accessing student web portals, parents address their adolescent students. The survey indicated that parents engaged in involvement closely related to academic socialization and academic instruction. While academic socialization strategies had been found beneficial for adolescent students (Kaplan-Toren, 2013; Wang et al., 2014), parental academic instruction had not (Froiland et al., 2012; Hill et al., 2004). The researcher therefore recommends that schools inform parents of age-appropriate forms of parental involvement. Educators can disseminate information pertaining to age appropriate involvement for parents at open houses, through the school’s website, newsletters, or email. Informing parents of best practice strategies for involvement could increase age appropriate parental involvement within the school community.

3). Data from the study suggested that parents often contacted teachers after accessing their student’s portal. To this end, the researcher recommends educators who utilize student portals to prepare for parental inquiries related to student grades. Preparation for parental
inquiring should include an ability to discuss the student’s performance on the assignments posted into their portals. More specifically, the study’s results suggested that parents often ask teachers for clarification regarding grades and for suggestions for ways to assist their student. Therefore it is recommend that teachers anticipate questions and prepare to engage in dialog with parents.

4). While the results of the study suggested that no relationship existed between student outcomes and parental access to student portals, parents were found likely to engage with their students and communicate with teachers after accessing portals. Based on the aforementioned results, the researcher suggests that schools use SIS to foster communication with parents and incorporate into multifaceted parental involvement program initiatives. Student portals can serve as an important tool to foster communication with parents but should not be considered as the sole component of a school’s parental involvement programs.

**Future Research Opportunities**

The study examined the pre-existing data from the PowerSchool accounts of 600 students in grades 7-12. In addition, a total of 81 parents participated in the survey related to their use of PowerSchool. The sample was from a predominantly white, high-wealth, suburban school district located in the Midwest. The study did not examine differences in the gender, SES, or ethnicity of students within the sample. Further, limitations of the study included the researcher’s inability to track parental access to their student’s web portal when utilizing the PowerSchool App or account for access to student portals if parents used their student’s log-in credentials rather than their own. The study’s narrow sample and limitations lend to future research opportunities.
Future studies that examine student portals designed by PowerSchool competitors would be interesting to conduct. There appear to be a number of companies that offer SIS programs for school districts to purchase and utilize. Other brands of SIS include ProgressBook, Schoology and Canvas, all of which offer digital student portals. Similar studies that utilize student data from different student portal software may yield different results. SIS software that differs from PowerSchool may also have fewer limitations such as the PowerSchool App that did not track parental access to student portals. Future research examining parental access to student portals designed by companies other than PowerSchool would add to the literature regarding parental involvement in the digital age.

Future studies with samples that differ from the present study also lend to research opportunities. Examinations of rural or urban school districts that utilize student portals would add to the research regarding parental access to student portals and student outcomes. Along the same lines, a comparative analysis of samples from a variety of settings such as rural, suburban, and urban schools may provide educators with greater insight related to parental involvement, SIS, and student outcomes. Moreover, future studies that take SES differences, ethnicity, and gender into consideration would produce data valuable to educators faced with the challenge of fostering parental involvement in their schools.
REFERENCES


Deslandes, R., & Bertrand, R. (2005). Motivation of parent involvement in secondary-


Involvement and Children's Achievement from Early Childhood through Adolescence.

_Parenting: Science and Practice, 13_(2), 133-152.


Date: November 9, 2015

To: Dr. Kathleen Crates

Cc: James B. Bocian

RE: Parental Involvement In Grades 7-12 Through Online Gradebook Access

Project Expiration date: November 9, 2016

The University of Findlay Institutional Review Board (IRB) has completed its review of your project utilizing human subjects and has granted authorization. This study has been approved for a period of one year only. The project has been assigned the number 909.

In order to comply with UF policy and federal regulations, human subject research must be reviewed by the IRB on at least a yearly basis. If you have not completed your research within the year, it is the investigator’s responsibility to ensure that the Progress Report is completed and sent to the IRB in a timely fashion. The IRB needs to process the re-approval before the expiration date, which is printed above.

Understand that any proposed changes may not be implemented before IRB approval, in which case you must complete an Amendment/Modification Report.

Following the completion of the use of human subjects, the primary investigator must complete a Certificate of Compliance form indicating when and how many subjects were recruited for the study.

Please refer to the IRB guidelines for additional information. This packet can be obtained within blackboard under community section. Please note that if any changes are made to the present study, you must notify the IRB immediately. Please include that number on any other documentation or correspondence regarding the study.

Thank you very much for your cooperation. If you have any questions, please feel free to contact IRB at (419) 434-4640 or email irb@findlay.edu.

Sincerely,

Jennifer Fennema-Bloom, Ed.D.
Chair, Institutional Review Board
Cc: IRB Office
APPENDIX B

Dear Parent,

You are invited to participate in a study entitled, Parental Involvement in Grades 7-12 Through Online Gradebook Access. The purpose of our study is: To determine if parental access to online grade books has a significant relationship with school success as measured by GPA, attendance, and disciplinary referrals in students grades 7-12. Your input regarding parental use of online gradebooks is valuable to the school district and may help guide future decisions. The following survey examines the following:

1. Does parental access to online grade books have a relationship with student GPA, attendance, and behavior?
2. What information do parents seek when accessing student online grade books?
3. What do parents do with student information once accessed?

The survey consists of questions related to the above research questions. The survey should take you approximately 5 minutes to complete.

All of your replies will be private and you will not be identified by name as a subject of our study. Completing the survey and submitting your answers serves as your informed consent for participation. Participating in the survey is entirely voluntary and you may withdraw at any time by terminating the survey without submitting your responses. This survey and consent waiver have been approved by The University of Findlay Institutional Review Board, which guarantees that research involving human subjects follows federal regulations. If you have any questions about your rights as a human subject please contact the IRB chair at irb@findlay.edu. You will be made aware of any information that varies from what has been provided to you and/or might affect your willingness to continue to participate in the project.

The information gained will provide insight into parental involvement strategies in schools. The benefit to parents and educators will be high. The use of anonymous surveys carries very low risk. Participants may find participating in an academic study intrinsically valuable.

We will submit the results of this study for publication in its entirety. The unprocessed data will be destroyed 3 years after publication. If you are interested in the project results please email us with for information on retrieving the data. Please keep a copy of this email for your records. If you have any questions regarding this project feel free to contact us at crates@findlay.edu or at 419-434-6552.

Thank you,

Dr. Kathleen Crates, Principal Investigator
James B. Bocian, Student Researcher
APPENDIX C

Survey: Parental Involvement in Grades 7-12 Through Online Gradebook Access

1. When accessing your student’s PowerSchool account, what information do you seek most often?

___ grades
___ attendance
___ discipline log
___ Other...

2. After accessing your student’s PowerSchool account, do you address your child in some way?

___ Yes, always
___ Yes, sometimes
___ No

3. If you address your child after accessing their PowerSchool account, please check all that apply.

___ I have a conversation with my child about the importance of grades
___ I encourage my child to succeed
___ I ask my child if he/she needs help
___ I reward my child based on the information
___ I punish my child based on the information
___ I ask for clarification
___ Other...

4. Have you contacted your son or daughter’s teacher after obtaining information from your child’s online grade book?

___ Yes
___ No

5. If you have contacted your child’s teacher after obtaining information from your child’s online grade book, please select the statements below that are true.

___ I asked the teacher for clarification regarding one of my child’s grades.
___ I requested a conference with my child’s teacher.
___ I asked for advice regarding how to help my child succeed in their class.
___ I asked about my child’s behavior in the classroom.
___ I requested the teacher contact me in the future regarding my child’s academic progress
___ Other...
6. How often do you speak to your child regarding the importance of their education?

___ almost daily
___ about once a week
___ about once every two weeks
___ about once monthly
___ never

7. Do you believe that accessing your child’s online grade book is a form of parental involvement?

___ Yes
___ No

8. After accessing your child’s PowerSchool account, do you offer to help your child with schoolwork at home?

___ Yes
___ No

9. Do you believe that your access to your child’s online grade book has helped you stay involved in their education?

___ Yes
___ No

10. Please describe the factors that motivate you to check your child’s PowerSchool account.