2021

A CASE STUDY of ADMINISTRATOR, TEACHER, AND PARENT PERCEPTIONS AND USAGE OF INFINITE CAMPUS AT THE SECONDARY LEVEL

Michael Kenneth Larson
Saint John's University, Jamaica New York

A CASE STUDY OF ADMINISTRATOR, TEACHER, AND PARENT PERCEPTIONS

AND USAGE OF INFINITE CAMPUS AT THE SECONDARY SCHOOL LEVEL

A dissertation submitted in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

to the faculty of the

DEPARTMENT OF ADMINISTRATIVE AND INSTRUCTIONAL LEADERSHIP

of

THE SCHOOL OF EDUCATION

at

ST. JOHN'S UNIVERSITY
New York
by
Michael K. Larson

Submitted Date: February 25, 2021   Approved Date: May 19, 2021

_____   _____
       Michael K. Larson   Dr. Catherine DiMartino

ABSTRACT

A CASE STUDY OF ADMINISTRATOR, TEACHER, AND PARENT PERCEPTIONS

AND USAGE OF INFINITE CAMPUS AT THE SECONDARY SCHOOL LEVEL

Michael K. Larson

Research has shown that parent involvement has been associated with positive academic outcomes, including but not limited to, increased academic performance, lower rates of retention/failure, increased self-regulatory behavior, higher social functioning, and reduced special education placements (Anderson & Minke, 2007; Scharton, 2019).

The use of on-line data management systems has proliferated over the course of the past decade. Throughout the 1990s, computer technology rapidly expanded in United States public schools. Between 1996-1997, U.S. school districts added 500,000 computers for administrative use (Darby & Hughes, 2005). The passage of No Child Left behind (NCLB) and Race to the Top bolstered the use of technology in U.S. schools. With an increased emphasis placed on school to home connection, technology-based Student information systems grew increasingly common (Hughes, 2005; Epstein, 2004).

Student information systems (SIS) provide teachers, parents, and students the ability to monitor relevant student data, include a portal for parents to access information about their students, offer reporting capabilities, manage student admissions, and provide modules for school staff. Additionally, they serve as a communication tool that connect school activity with interested parties (parents, teachers, and administrators). Commonly known examples of SIS include, but are not limited to; PowerSchool SIS, Skyward,

Gradelink, Infinite Campus, and a host of others. Commonalities often include the posting of academic and attendance data to parents, and students ("Best K-12", 2020).

School to home communication has been determined to play an influential role in student achievement (Anderson & Minke, 2007; Epstein, 2010; Henderson & Mapp, 2002; Scharton, 2019), however, few research studies exist examining the landscape of the Infinite Campus Parent Portal as a communication vehicle, along with the parent, teacher, and administrator perceptions of this informational systems. The purpose of this study is to understand the use of Infinite Campus and to determine the extent to which information posted therein inspires intervention (e.g., contact with school officials, academic support at home, etc.) Results from this study will provide schools/districts with a greater understanding of parent/guardian Infinite Campus usage patterns and present the District with an opportunity to further enhance their communication capacities.

DEDICATION

I dedicate the completion of this research to my incredible wife and the loving mother of our two beautiful, caring, kind, and remarkable children. Throughout this journey, you have been a constant, a motivator, a provider, and most importantly, the person who has afforded me the time necessary to complete this work. Without complaint, you consistently afforded me space to complete this dissertation, supported our two incredible children, and inspired me (by your example) to be the best reflection of self. The realization of this goal was exclusively predicated on your willingness to make personal sacrifices, most notably sacrifices related to the invaluable gift of time. I could not have achieved this goal without your constant love, guidance, support, and understanding of the work inherent in completing this dissertation. Today, tomorrow, forever, and always.

To our remarkable children, I thank you for allowing me to achieve this goal. This work similarly cost us time, however like your mother, you never complained. Thank you both for continually reminding me what unconditional love looks and feels like. The two of you reflect my proudest achievement and I am privileged/blessed to call myself your father. I love you beyond words and I am proud of you.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

Introduction

Research has shown that there is a relationship between parent involvement and academic success. Parent involvement has been associated with positive academic outcomes, including increased academic performance, lower rates of retention and failure, and reduced special education placements (Anderson & Minke, 2007; Henderson et al., 2004: Scharton, 2019). Additionally, parent involvement has been associated with positive behavioral outcomes including, increased self-regulatory behavior and higher social functioning skills (Anderson & Minke, 2007; Scharton, 2019). Parents play an integral role in the maintenance of a safe home environment and in connecting with teachers to support academic progress and development. Research demonstrates that, with increased degrees of parent involvement, students develop attitudes that are more positive and behaviors toward school, greater homework completion rates, improved academic performance, and an increased likelihood of involvement in post-secondary education programs (Chadwick, 2004; Desforges & Abouchaar, 2003; Henderson & Mapp, 2002).

The accessibility/use of on-line data management systems has proliferated exponentially over the course of the past decade. The introduction of personal computers (PCs) throughout the 1990s presented educators and school districts with quick and easy access to record, refine, and input student information. Throughout the 1990s, computer technology rapidly expanded in United States public schools. Between 1996-1997, United States school districts added 500,000 computers for administrative use (Darby & Hughes, 2005). School districts nationwide have invested more than one billion dollars in

the development of Student Information Systems over the course of the past decade

(Tucker, 2010). Presently, Student Information Systems offer parents with access to

school level data. This data may include schedules, attendance histories, grades, etc. This

type of data may alter trends in parenting and parent engagement ensuring a meaningful

link toward potential involvement (Weiss, et al., 2010). The proliferation of such

technologies coupled with federal legislative efforts, e.g. No Child Left Behind and Race

to the Top, have only further advanced the usage and reliance on such student

information systems in schools.

The passage of the No Child Left Behind (NCLB) Act in 2002 reflected

Congress' reauthorization of the Elementary and Secondary Education Act (ESEA), the

principal federal law governing education policy from kindergarten through high school.

NCLB was built on four pillars, including accountability for results, an emphasis on

doing what works based on scientific research, expanded parental options, and expanded

local control and flexibility (No Child Left Behind, 2003, p. 1). The passage of NCLB

bolstered the use of technology in United States schools. Part of the NCLB legislation

connected public school funding to parental involvement plans. This requirement created

a flurry of activities within United States schools including, greater involvement of

school Parent Teacher Organizations, increased opportunities for parents to assume

influential roles in school building/ school district committees, expanded school to

community partnerships, and school to home communication initiatives (Darling &

Westburg, 2004; Nye et al., 2006).

In 2009, Race to the Top offered states "$4 billion dollars toward reshaping their

education systems to ensure that every student would graduate college and become career

ready, regardless of disability, race zip code or family income" (*No Child Left Behind: A Parent's Guide*, 2003; *Fundamental Change: Innovation in America's Schools Under Race to the Top,* 2015, p. iii). To earn portions of the $4 billion dollars available to States, local education agencies had to establish rigorous student achievement standards, develop teachers as leaders, and leverage data systems to inform and enhance instruction and improve lowest performing schools. The funding available to states demanded that districts create/ advance their data management systems and use of technology to improve instruction and support students. Successfully addressing this charge resulted in the development and implementation of data management systems that provided a range of resources to different audiences (teachers, students, and parents). The systems implemented provided users with access to assignments, grades, learning activities, academic expectations, school attendance, grades, and other academic content, e.g., lesson plans, unit plans, etc. (*Fundamental Change*, 2015, p. 15). Increasingly, United States schools have turned to a variety of technological applications to inspire greater parent involvement. These platforms may include, email, automated phone calls, websites, etc. (Bernstein, 1998; Rogers & Wright, 2008).

With an increased emphasis placed on school to home communication, Student Information Systems (SIS) grew increasingly common in United States schools (Darby & Hughes, 2005; Epstein, 2004).   Student information Systems provide parents the opportunity to access and monitor their children's school related performance on demand (Bird, 2006), and serve to bridge the communication gap. These data management systems provide teachers, parents, and students the ability to monitor grades, attendance, progress, etc. Additionally, they serve as a useful communication tool that connect school

activity with interested parties (teachers, administrators, and parents). Communication between school and home is an ongoing exchange with no definitive beginning or end. Effective communication reflects a thoughtful, planned approached and reflects an understanding that each contact provides an opportunity to develop the partnership between schools and families (Adler & Rodman, 1994).

Commonly known examples of SIS include, but are not limited to; PowerSchool, Eschol, Apple School, Infinite Campus, Engrade, LearnBoost, ThinkWave, etc. (McKenna, 2016). McKenna (2016) states that "Nearly all of America's public schools now post grades on-line through student-management software such as PowerSchool, Engrade, LearnBoost, and ThinkWave" (p. 2). The expansion of this technology has occurred steadily over the course of the past 15 years with both positive and negative implications. The potential benefits of these technologies include expanded opportunities for parents to review academic progress and monitor achievement. However, detrimental secondary consequences must also be considered. SIS systems could potentially discourage students from experimenting, making mistakes, or taking risks because of constant assessment and reporting of performance (McKenna, 2016). While the use of student information systems has increased significantly over the past decade, a rapid increase in the use of learner management systems was similarly noted beginning in March of 2020.

The COVID-19 pandemic, and ensuing school closures, resulted in widespread application and use of learner management systems in schools nationwide. In March of 2020, the COVID-19 pandemic ushered in a wave of school closures across the United States. In New York State, public schools closed their doors from March through June of

the 2019-2020 school year. The pandemic resulted in an intense reliance on technology as a tool to maintain continuity in educational programming for children. The pandemic resulted in "a growing reliance on the use of technology to learn, live, and stay connected" (Goldschmidt, 2020, p. 88). Schools nationwide found themselves in positions that required rapid shifts to virtual learning platforms and expanded the use of both learning management systems and student information systems.

Schools began to offer online (virtual) learning for students to maintain and create educational opportunities for students, despite mandated school closures (*Center for Disease Control and Prevention: Tips to Keep Children Healthy While School's Out,* 2020). Educators were forced to rapidly integrate technological applications into their daily/remote practices. While educators, students, and parents experienced difficulties with a rapid shift to remote instruction, many adapted to this new paradigm. It should be noted that adapting to this new paradigm does not necessarily indicate that all users shared a similar experience, nor does it indicate that the quality of instruction or educational outcomes were achieved at rates commensurate with in-person instructional opportunities. Access to technology, internet access, and the professional capacities of educators created disparity in the experiences for students (Guernsey et al., 2020). While learner management systems continued to grow in popularity during the COVID-19 pandemic, this study focuses on the student management system, Infinite Campus. In particular, the features provided within the Infinite Campus Parent Portal.

This study focuses on one type of information management system, the Parent Portal provided by Infinite Campus. As described by Infinite Campus, their goal is to "Support student learning by ensuring school districts streamline educational processes,

promote stakeholder collaboration and personalize learning. Our service organization easily manages implementations, trains new and existing customers and provides districts with support" (Infinite Campus, 2020). Infinite Campus supports a variety of administrative needs including, scheduling, report cards, behavior modules, and other learning management tools such as quick assessments, score analysis tools, and mechanisms to share lesson plans.

Purpose of the Study

Parent involvement in schools has proven to be a long-standing topic of study. Parents play an integral role in supporting, advancing, and developing their children academically and socially. When parents are involved, higher rates of academic gain are realized by students at all economic levels (Hart, 1988). A variety of research studies have been conducted to examine the role parents play related to involvement in schools and the factors that either encourage or dissuade involvement. It is known that greater parental involvement yields positive academic outcomes for students (Gonzalez- DeHass et al., 2005; Greenwood & Hickman, 1991; Scharton, 2019). "Research shows a positive relationship between parent involvement and a host of outcomes for students: higher grades, long term academic achievement, increases in student attendance and retention, and enhanced motivation and self-esteem" (Lazar et al., 1999, p.5).

Despite the known benefits of parental involvement in the academic lives of children, there are factors that contribute to a lack of such involvement.

Patricia Clark Brown (1989) outlined the following reasons for diminished parent involvement in school related matters:

1. Lack of time. Working parents are often unable to attend school events during the day.
2. Feelings of inadequacy. For many parents, schools were not a positive experience. They may feel they do not possess the skills to help.
3. Overstepping their bounds. Confident parents may feel they should not "interfere" with the school's business. (p.3)

Albert Holliday (1986) noted:

1. School's organizational structure does not lend itself to sustained parent-teacher contact.
2. Adolescents are increasingly independent and may resist when parents attempt to become involved. (p.7)

As children mature through their school ages and become increasingly more autonomous, parent involvement begins to decline. The parent-student relationship shifts with maturation. As children achieve greater independence and begin to establish their own identity, parents assume more passive roles in their academic lives (Brown, 1989). In the early years, parents take an active role as filed trip supervisors, class parents, class aides, school to community event coordinators, etc. Parental involvement shifts during junior and senior high school toward advising and/or administrating as adolescents seek autonomy and begin to assume increased ownership of their academic lives (Dwyer & Hecht, 1992).

While barriers to parental involvement may exist, parent involvement leads to positive academic outcomes. Communication vehicles prove essential to the enfranchisement of parents into the academic lives of students. Dwyer & Hecht (1992) postulated, "The exact ways and means of [parent] involvement may vary according to the situation of the school and the parents, but all programs must begin with the simple act of communicating" (p. 286). The importance to communicate with parents has been underscored by a number of legislative events including, but not limited to Race to the

Top, No Child Left Behind, the Elementary and Secondary Education Act, and the National Defense Education Act.

Federal legislative efforts, e.g., Race to the Top and No Child Left Behind, coupled with the proliferation of computer technologies have afforded schools the opportunity to present parents and students with real time access to student academic performance. The passage of No Child Left behind (NCLB) bolstered the use of technology in United States schools. An increased emphasis was placed on school to home connection. Technology-based Student Information Systems grew increasingly common in United States schools (Hughes, 2005; Epstein, 2004). This study will explore the role that the Infinite Campus Parent Portal plays as a technological tool to support communication between schools and residences.

The critical role that parents play in the academic lives of their children, along with the growing role that Parent Portals play in transmitting information to parents, it proves necessary to explore the teacher, administrator, and parents' perspectives of the use of Infinite Campus Parent Portal as communication vehicle. The problems addressed by this study include the motivations for accessing Campus features and the perceptions of teachers, administrators, and parents related to Infinite Campus Parent Portal as a tool for communication between schools and residences. Further, this study will explore the extent to which digital grade portals lend themselves to enhanced school to home communication in high performing districts. Few studies have been conducted related to Student Information Systems and Parent Portal use, namely, Ellis (2008), Koch (2010) and Olmstead (2013). The studies presented findings that reference the potential benefit(s) Parent Portals may achieve as school to home communication platforms.

Greater exploration into this topic is required to further develop the potential effectiveness of the Infinite Campus Parent Portal as a communication vehicle.

The Infinite Campus Parent Portal provides a communication vehicle from which parents, teachers, and administrators establish lines of communication to support the academic needs of students. While the Portal does not, in sole measure, bridge a communication gap, this study seeks to explore the usage patterns, and perceptions of teachers, administrators, and parents related to the Infinite Campus Parent Portal.

Theoretical Framework

The theoretical framework that guides this study includes contributions from both Joyce Epstein's (2001) spheres of overlapping influences and Peter Senge's (2006) work related to learning organizations, mental models, and shared vision.

Epstein defined a theory of overlapping spheres of influence asserting that students learn more when parents and teachers recognize common goals and responsibilities for student learning (Epstein, 1987, 2001). In this model, three contexts (home, school, and community) overlap. Within the overlap of the spheres of influence, common goals are established and best results for children can be achieved (Epstein & Voorhis, 2010). Additionally, Epstein (1995) developed a framework related to parent involvement in schools. Within this framework, communicating and decision- making are included as central themes. Communicating is defined as "designing and conducting effective forms of two-way communications about school programs and children's progress" (Epstein & Voorhis, 2010, p. 2). Decision-making is defined as the inclusion of families as participants in school decisions, governance, and advocacy activities through

school councils or improvement teams, committees, and parent organizations. Working from the assumption that parents/guardians have common needs for school to home communication and share a consistent vision related to student achievement, a marriage between the work of Epstein- communication and Senge shared vision can be further developed.

Senge (2006) developed five disciplines related to learning organizations. These disciplines include personal mastery, mental models, team learning, shared vision, and systems thinking. An established learning organization possesses the ability to evolve, set aside old ways of thinking (mental models) and develops a shared vision for the future (Senge, 2006; Lunenburg, 2011). An organization that has developed the capacity to continually change and adapt reflects the definition of a learning organization (Senge, 2006). Additionally, learning organizations demonstrate the capacity to establish a shared vision. As defined by Senge (2006) a shared vision reflects, "The set of tools and techniques for bringing all disparate aspirations into alignment around things people have in common- their connection to a school" (p. 72).

A marriage between the work of Epstein (communicating and decision-making) and Senge (shared vision and learning organization) reflects the foundation of this theoretical framework. This case study seeks to explore the perceptions of teachers, administrators, and parents related to the use of Infinite Campus Parent Portal as a communication vehicle. Through this exploration, the researcher will determine the extent to which the communication goals outlined by Epstein and the shared vision goals established by Senge, are satisfied through the use of the Parent Portal.

Significance of the Study

This study is significant as it seeks to explore the extent to which the Parent Portal features provided by Infinite Campus serve as an effective communication vehicle to bridge any perceived communication gap between schools and households. Additionally, given the present proliferation of such data management systems nationwide (Darby & Hughes 2005; McKenna, 2016), the research seeks to gather teacher, administrator, and parent perceptions related to the use of such portals as a communication vehicle. Lastly, the research seeks to determine the extent to which teacher, administrator, and parent beliefs and assumptions influence the frequency with the Infinite Campus Parent Portal is utilized/accessed. This study serves to advance our understanding of usage patterns and perceptions of teachers, administrators, and parents. It is believed that such portals aide in communication, help to bridge the communication gap between the classroom and student's residences, and serve to provide insight into performance. With the above in mind, it proves critical to gauge teacher, administrator, and parent perceptions relative to these portals.

Research Questions

The following research questions guided the study:

- What are the user (teacher, administrator, and parent/guardian) perceptions of Infinite Campus at the high school level in a suburban district?

- How do teachers, administrators, and parents use Infinite Campus at the high school level in a suburban district?

- To what extent does the use of Infinite Campus, at the secondary/ high school level affect family engagement?

Design and Methods

This case study will employ multiple data sources, including interviews with teachers, administrators, and parents that will rely on open-ended interview questions. Additionally, usage patterns will be reviewed to examine parent frequency of access to the Parent Portal. The research seeks to determine how parents access their child's academic performance information, their motivations for doing so, and the response that generates from the information presented. A case study is useful because it will capture, through multiple types of data, the lived experiences of participants as well as their recorded use of the platform.

The research site is a public high school setting (grade nine through grade twelve) with 2,187 students. The site is in a suburb roughly 50 miles from a major metropolis. The research will shed light on the motivations for accessing the portal, user preferences, and the perceptions of various stakeholder groups.

Definition of Terms

Learner Management System: Software for the administration, documentation, tracking and reporting of educational courses, training programs, or learning development programs (Ellis, 2009).

NCLB: The elementary and Secondary Education Act (ESEA), was reauthorized as the *No Child Left Behind Act of 2002*. NCLB reflects a federal law influencing schools from kindergarten through 12th grade. NCLB focuses on stronger accountability for academic

results, increased freedoms for state education policy, improved curricular efforts ground in scientific research, and increased choices for parents (United States DOE, 2020).

Parent Portal: The Infinite Campus Parent Portal is a web-based application that allows parents to review grades, assignments, calendars, attendance, schedules, reports, and more (Infinite Campus, 2019).

Student Information System (SIS): As defined by the software company Infinite Campus, a SIS "supports student learning by ensuring school districts streamline educational processes, promote stakeholder collaboration and personalize learning. Our service organization easily manages implementations, trains new and existing customers and provides districts with support" (Infinite Campus, 2019).

CHAPTER 2

Introduction

This section presents findings evident in the existing research literature. Information presented in subsequent sections includes related scholarship obtained from journals, reports, and reputable websites. The findings from the literature reviewed have been organized along the following thematic descriptors: 1) Historical evolution of home-school communication in the United States from 1958 to present; 2) Parent involvement, including factors that influence, and or deter involvement along with the associated benefits of parental involvement; 3) School to home communication methods and evolution, and 4) Student information systems. This section concludes with a discussion on the gaps that exist in the present literature.

Theoretical Framework

The theoretical framework that guides this study includes contributions from both Joyce Eptsein's (2001) Spheres of Overlapping Influences and Peter Senge's (2006) work related to learning organizations, mental models, and shared vision:

Epstein Framework for Parent Involvement

Epstein (1987) defined a Theory of Overlapping Spheres of influence asserting that students learn more when parents and teachers recognize their shared goals and responsibilities for student learning (Epstein, 1987). In this model, the three contexts "Home, school, and community- "overlap" to some extent, thereby identifying areas of separate and combined influences on children" (Epstein & Voorhis, 2010, p. 2). The theory postulates that the backgrounds and practices of the family, the practices of the

school (including classroom practices), and time represent some of the external forces that affect parental involvement.

As evident in figure 1, a child's learning is impacted by each of these contexts (Sheldon et al., 2010). Each context plays an influential role in the life of a student. Schools assume a critical role within the spheres defined. When school programs are developed to promote parent involvement, the potential to increase shared responsibilities and reduce conflict can be realized. A graphic illustration of these overlapping spheres can be found in figure 1 (Epstein, 2001).

Figure 1. Epstein Overlapping Spheres of (Epstein, 2010).
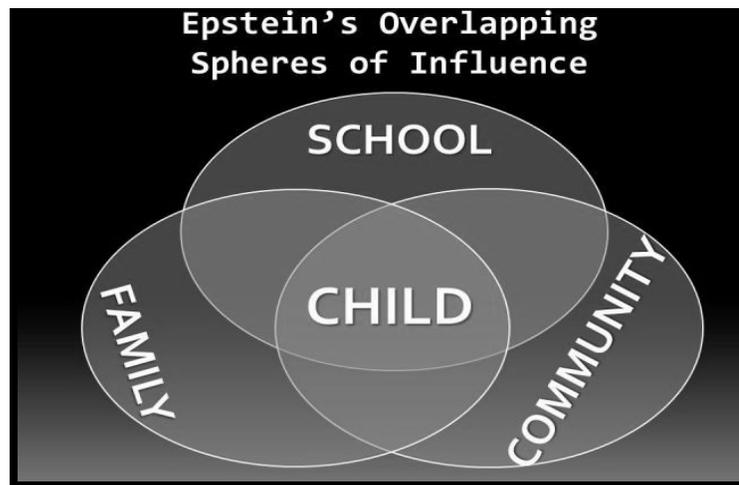
Further, these structures, external and internal, can be pulled together or pushed apart, based on philosophies. The internal structure, as defined by Epstein (2010) identifies the structure based on interpersonal relationships and connections between parents, children, and educators. The external structure dictates that these contexts either may come together, or be pushed apart, depending on the school policies, philosophies, and or activities that occur within each context. Best results can be maximized, for students, when the three spheres, family, home and community interact symbiotically (Epstein, 2010). Organizational structures and processes must be implemented, continually

monitored, and improved upon if best results for children are to be realized (Epstein

&Voorhis, 2010). The areas of overlap relative to the contexts described above includes

the assertion that, within the overlap, opportunities for school to home partnership can be

maximized. Within this overlap, Epstein has identified six types of involvement for

parents, as well as the shared obligation between parents and schools to work

collaboratively.

Epstein (1995) developed the following framework related to parent involvement

in schools. The framework includes the following:

- *Parenting*- helping all families understand child and adolescent development and establishing home environments that support children as students.
- *Communicating*- designing and conducting effective forms of two-way communications about school programs and children's progress.
- *Volunteering*- recruiting and organizing help at school, home, or in other locations to support the school and students' activities.
- *Learning at home*- providing information and ideas to families about how to help students with homework and curriculum-related activities and decisions.
- *Decision-making*- having parents from all backgrounds serve as representatives and leaders on school committees and, with their leadership, obtaining input from all parents on school decisions.
- *Collaborating with the community*- identifying and integrating resources and services from the community to strengthen and support schools, students, and their families, and organizing activities to befit the community and increase students' learning opportunities." (Epstein & Voorhis, 2010, p. 2)

The framework established by Epstein is to provide researchers and educators a

vehicle to think systematically about the ways in which parents can become involved in

the schooling of their children. While these six types of involvement do not, as sole

measures, ensure effective partnerships, they provide a foundation from which schools

can begin to examine their efforts to enfranchise parents into the school community

(Epstein & Voorhis, 2010). Within the contexts of these six types of family involvement,

the variety of partnerships available to support successful student outcomes can be better understood. Schools that employ a variety of programs designed to connect school, community, and parents in support of teaching and learning initiatives are more likely to build trust between administrators, teachers, and parents (Barnyak et al., 2009; Feuerstein, 2000). To foster partnerships with parents, it is important to explore the parent perceptions of the Infinite Campus Parent Portal as a communication tool between schools and households. While Epstein provides a stable foundation from which to examine the perceptions of teachers, parents, and administrators related to Infinite Campus as a communication vehicle, a marriage with the work of Senge related to learning organizations and shared visions guides this theoretical framework.

Senge Learning Organizations

Peter Senge (2006) developed five disciplines related to learning organizations. These disciplines include personal mastery, mental models, team learning, shared vision, and systems thinking. An organization that has developed the capacity to continually change and adapt reflects the definition of a learning organization (Senge, 2006). For learning organizations to be developed, teachers, administrators, and other stakeholders must learn how to develop their own internal capacities to learn, as well as the capacity to adapt to shifting times (Lunenburg, 2011).

As described by Senge (2006), "A learning organization is an organization in which people at all levels are, collectively, continually enhancing their capacity to create things they really want to create (p. 20). Additionally, learning organizations are "Organizations where people continually expand their capacity to create the result they truly desire, where new and expansive patterns of thinking are nurtured, where collective

17

aspiration is set free and where people are continually learning how to learn together"

(Senge, 2006, p. 3). A learning organization develops a culture that encourages

contributing members to utilize behaviors and processes to improve the organizational

whole (Bulach et al., 2008). Central to the learning organization is adaptability. Learning

organizations must demonstrate the ability to evolve and adapt to changing landscapes

(Gortner et al., 2007). Inherent in this ability to evolve is the internal capacity of the

organization to set aside old ways of thinking (mental models) and demonstrate the

capacity to develop a shared vision (Senge, 2006; Lunenburg 2011). Mental models, the

lens with which parents view the importance of school to home communication, along

with the parents' beliefs about their own roles and abilities as they relate to supporting

their children(s) academic trajectory, will influence their level of response/ engagement

in school related matters.

From the parent's perspective, their mental models related to the use of Infinite

Campus Parent Portal as a conduit to school related information proves critical to this

study. Parents possess a variety of different lived experiences. Their interactions with

schools as students themselves, or as parents, will contribute to their mental model.

Schools must take into consideration the lived experiences of their parents and

understand their beliefs and experiences to form effective partnerships (Glasgow &

Whitney, 2009). Schools as learning organizations often face shifting expectations. An

influx of new students, evolving State standards, shifting state/federal mandates, state

testing requirements, and new technologies, serve to disrupt existing metal models for

teachers, administrators, and school systems. For example, Race to the Top and No Child

Left behind endeavored to improve academic achievement for all students and demanded greater communication efforts between schools and the communities they serve.

Race to the Top and No Child Left behind demanded increased communication between parents and schools. The funding available to states demanded that districts create/ advance their data management systems and use of technology to improve instruction and support students. Successfully addressing this charge resulted in the development and implementation of data management systems that provided a range of resources to different audiences (teachers, students, and parents). Some of the data management systems implemented provided users with access to assignments, grades, learning activities, academic expectations, school attendance, grades, and other academic content, e.g., lesson plans, unit plans, etc. (*Fundamental Change*, 2015, p. 15). The use of data management systems (e.g., Parent Portals) became useful tools, shifting elements of the communication paradigm.

Mental models reflect the lens from which an individual views a given situation; "Like a pane of glass framing and subtly distorting vision, mental models determine what is seen" (Senge, 2006. p. 67). Mental models are firmly held beliefs possessed by a given individual. These mental models influence an individual's capacity to accept change and often rely on the level of trust that exists between the individual and the institutions. The mental models (e.g., firmly held beliefs) of parents, teachers, and administrators related to the use of Infinite Campus factors heavily on their anticipated use of the platform. For instance, parents, teachers, and administrators who possess apathy or lack training related to the use of Infinite Campus, may developed a mindset that reduces their usage of the

platform. Conversely, those that view the Infinite Campus Parent Portal favorably may be more likely to interact with the platform more frequently.

A marriage between the work of Epstein (decision-making) and Senge (shared vision/ mental models) reflects the foundation of this theoretical framework. Epstein defined decision making as "Having parents from all backgrounds serve as representatives and leaders on school committees and, with their leadership, obtaining input from all parents on school decisions" (Epstein & Voorhis, 2010, p. 2). In Epstein's model, decision making, and collaboration reflect two of the six essential components of the framework for parental involvement in schools. In these components of the framework, parents as members of the community, serve a vital role in the decision making of the schools. Their participation is recommended in school decisions, governance, advocacy on school councils, improvement teams, parent organizations, etc. (Epstein & Voorhis, 2010).

Senge defines shared vision as "the set of tools and techniques for bringing all disparate aspirations into alignment around things people have in common- their connection to a school" (Senge, 2006, p. 72). In the development of a shared vision, there is a commitment that is created collectively. The contributing stakeholders develop a sense of shared ownership, values that will developed and maintained and goals to be achieved along the way. The establishment of a shared vision is not top down, rather a horizontal process that embraces the contributions from a variety of stakeholders. While a vision that is established by a school leader may prove beneficial for the management of a crisis, such top-down visions are not sustainable (Senge, 2006). At the intersection of the shared decision/ collaborating with the community goals (established by Epstein's

Framework for parent involvement, 2010) and shared vision established by Senge (2006) commonalities can be found.

No Child Left Behind and Race to the Top expected schools to place greater emphasis on school to home communication (Greitz Miller et al., 2016). This is consistent with goals established by Epstein. Known benefit exists between parental involvement and student outcomes. These benefits include, but are not limited to, higher rates of college admittance, greater academic achievement, increased graduation rates, and increased attendance in schools (Walberg, 1984). The development of shared mental models related to collaborative efforts and an exploration of the mental models possessed by each stakeholder group (parent, teacher, and administrator) related to the Infinite Campus Parent Portal proves important to this study.

Within the context of the framework established by Epstein and the learning organization work of Senge, this case study seeks to assess teacher, administrator, and parent perceptions related to the impact that the use of Infinite Campus has on achieving the communication goals outlined by Epstein above, in concert with organization learning as outlined by Senge. The study seeks to explore the perceptions and usage patterns of parents, teachers, and administrators related to the Infinite Campus Parent Portal as a communication vehicle between schools and households.

Review of the Literature

Legislation and U.S. Schools

The Federal Governments involvement in U.S. schools has been noted in a variety of ways throughout the decades. Several legislative endeavors have specifically focused

on the expanded use of technology in schools along with targeted efforts to improve school to home communication. Noted legislative efforts related to the expanded use of technology in schools and/or the enhancement of school to home communication methods, include the National Defense Education Act (1958), the Elementary and Secondary Education Act (1965), the No Child Left Behind Act (2002), and the Every Student Succeeds Act (2015).

National Defense Education Act 1958

The launch of Sputnik in 1957 inspired Americans to consider an overhaul of the nation's schools. As Americans began to consider that the United States was falling behind the Soviet Union in math and science education, President Eisenhower signed into law the National Defense Education Act (NDEA) in 1958. The passage of this legislation reflected the Federal Government's largest financial contribution to American schools at approximately $1 billion dollars over four years. The immediate aim of this legislation was to increase the number of highly trained personnel in the fields related to national security, science, mathematics, and foreign languages. The NDEA authorized Federal support for college loans, sought to improve instruction in science, mathematics, foreign languages, history, civics, geography, economics, English, reading, and industrial arts and improve communications media for educational purposes. Notably, the NDEA included funding for the expansion of the use of technology in American schools. At this time, expanded technologies included television, motion pictures, radio, and computers in schools (The National, 1968). Federal involvement in schools continued with the passage of the elementary and Secondary Education Act, 1965.

Elementary and Secondary Education Act 1965

Following the passage of NDEA, the Elementary and Secondary Education Act (ESEA) was passed in 1965. ESEA reflected the Federal government's efforts to double the amount of federal aid available to schools. There were five major provisions within the legislation. ESEA provided financial infusions for low-income students, enhanced spending for library resources for schools, provided increased funding for supplementary education centers and educational research/training facilities, and appropriated funding to strengthen state departments of education. Title I of the (ESEA) specifies that programs and practices of partnership must be developed for schools to qualify or maintain their funding. States and districts were mandated to developed policies to create systematic connections with families and communities. Title II of the ESEA provided for $100 million dollars to be used to advance library resources, in particular audio-visual materials (Osborne, 1965). Additionally, this act was designed to fund primary and secondary education, and authorized professional development, instructional materials, and resources to support educational programs as well as parental involvement promotion.

While the ESEA was originally authorized through 1970, the federal government has re-authorized the Act periodically (every five-ten years), most recently with the passage of No Child Left Behind Act in 2001 (Jefferson- Jenkins & Hawkins Hill, 2011).

A Nation at Risk 1983

In 1983, The National Commission on Excellence published *A Nation at Risk.* The Commission reported that large percentages of students exiting high schools were

unable to read and brought the needs for educational reform to the forefront of educational leaders, parents, students, and schools. The report indicated that the United States no longer held an educational edge on the rest of the world (Jefferson-Jenkins & Hawkins Hill, 2011). The report postulated that too many students were graduating from schools functionally illiterate, performance in general was plummeting and that international competitors were surpassing the achievement levels of the U.S. students ("25 Years After *A Nation at Risk*," 2008).

The National Commission on Excellence in Education reported in *A Nation at Risk* that through the course of a student's 12 years of education, students spend 13% of their waking life in school buildings. However, ½ to ¾'s of total school time is wasted because of absences, inattentiveness, disruptions, non-instructional activities and or lessons that are either too easy or too hard. What *A Nation as Risk* did not address was the 87% of time that school age children spend at home and the responsibility of parents to support their child's academic progress and development. Since most a student's formative years are spent influenced by factors outside of school, cultivating effective school to home partnerships proves critical for students. Using effective communication methods and through the cultivation of effective partnerships that bridge classroom instruction and home-based supports, positive gains are likely to manifest themselves. It is known that educational experiences in the home serve to advance knowledge acquisition and develop a student's capacity to transfer learnings to future experiences (Walberg, 1984).

As previously stated, the Elementary and Secondary Education Act was periodically reauthorized, evidenced by the passage of No Child Left Behind Act of 2001

by President Bush. It is noteworthy that efforts to reform U.S. schools related to the publication of *A Nation at Risk,* were related to higher standards for students, strengthening academic programs, improved management of classroom time, and teacher retention (Jones, 2009). Twenty years later, No Child Left Behind outlined similar goals. Both sought to improve educational outcomes for students through higher standards for students and improved teacher preparation programs. Both rely on the use of standardized test scores as accountability measures and efforts to measure student and teacher performance (Jones, 2009).

No Child Left Behind 2002

The passage of the No Child Left Behind (NCLB) Act in 2002 reflected Congress reauthorization of the Elementary and Secondary Education Act (ESEA), the principal federal law governing education policy from kindergarten through high school. NCLB "reflected the federal government's most dramatic foray into the elementary and secondary public-school policymaking terrain" (Heise, 2017, p. 1859). NCLB reflected the Federal Government's promise to strengthen America's education system and improve academic achievement levels for all students nationwide. NCLB was criticized for its emphasis on standardized testing and reduced school district/state autonomy. Conversely, proponents supported NCLB's goal to bridge achievement gaps between middle-class and upper-class students and those underserved by their schools (Heise, 2017). This legislation influenced both how and what teachers would teach, as well as how and what students would learn, stipulating that "every child in every public and charter school in the country is tested in Grades 3-8 and Grade 10. Schools that did not improve rapidly enough to have 100% of their children proficient in reading and

mathematics by 2014 could have teachers and administrators fired, be reconstituted, or closed" (Berliner 2011, p. 287).

From a communication standpoint, NCLB evidenced the Federal Government's commitment to bridging the communication gap between homes and schools. The legislation recognized that parents were their children's first teachers and that their future academic success was likely tied to continued involvement during school age years (DePlanty et al., 2007). Widespread application and use of on-line gradebooks was bolstered by (1) the No Child Left Behind Act's inaugural definition of parent involvement… and (2) the requirement that school districts applying for Title II funds must have in place a process for effective use of technology to promote parent involvement and increase home-school communication (Greitz Miller et al., 2016. p.46).

NCLB was built on four pillars, including accountability for results, an emphasis on doing what works based on scientific research, expanded parental options, and expanded local control and flexibility (*No Child Left Behind: A Parent's Guide,* 2003, p. 1). The passage of NCLB bolstered the use of technology in United States schools. Part of the NCLB legislation connected public school funding to parental involvement plans. This requirement created a flurry of activities within United States schools including, but not limited to, greater involvement of school Parent Teacher Organizations, increased opportunities for parents to assume influential roles in school building/ school district committees, expanded school to community partnerships, and school to home communication initiatives (Darling & Westburg, 2004; Nye et al., 2006).

NCLB identified six areas of reform, one of which was dedicated to increasing school to home communication. The legislation stipulated that any school receiving Title

I funds were expected to develop partnerships and programs to involve parents. Ultimately, the goal of this portion of the legislation was to involve parents in the educational practice to ensure a greater degree of student success. Educators were expected to build partnerships with parents, assist parents with an understanding of state standards/assessments, provide curricular materials and communicate in languages that parents could understand (Epstein, 2004). Specifically, section 1118 of NCLB established standards that specifically enumerated communication with parents regarding their children's progress on a regular basis (US DOE 2010). Schools can address this need, in part, through the widespread use and application of student information systems, e.g., the Infinite Campus Parent Portal.

With the passage of NCLB, greater responsibilities were placed on schools to record, track, and transmit data relative to student achievement and performance. Additionally, schools were expected to ensure increased opportunities existed for parent involvement along with access to information (Darby & Hughes 2005; McIntire, 2004; McKenna, 2016). With these increased expectations on schools, student information systems have become the standard mechanism for satisfying some of the NCLB mandates (McIntire, 2004; McKenna, 2016). To further incentivize schools to provide improved educational outcomes and expand communication efforts, the Federal Government offered states portions of a $4 billon dollar financial incentive through Race to the Top. This program once again incentivized schools, through funding, to improve/enhance their communication capacities to ensure a degree of connection between schools and households.

Race to the Top

In 2009, Race to the Top, offered states "$4 billion dollars toward reshaping their education systems to ensure that every student would graduate college and become career ready, regardless of disability, race zip code or family income" (*Fundamental Change*, 2015, p. iii). To earn portions of the $4.35 billion dollars available to states, local education agencies had to establish rigorous student achievement standards, develop teachers as leaders, and leverage data systems to inform and enhance instruction and improve lowest performing schools. The funding available to states demanded that districts create/ advance their data management systems and use of technology to improve instruction and support students. Successfully addressing this charge resulted in the development and implementation of data management systems that provided a range of resources to different audiences (teachers, students, and parents). The systems implemented provided users with access to assignments, grades, learning activities, academic expectations, school attendance, grades, and other academic content, e.g., lesson plans, unit plans, etc. (*Fundamental Change*, 2015, p. 15).

The Elementary and Secondary Education Act 1965, No Child Left Behind Act 2002, and Race to the Top 2009 all demonstrate a similar interest in bridging achievement gaps, increasing communication, providing evidence of student academic achievement (testing), and incentivized districts/states to adjust practices to secure federal funding. These efforts continued with the passage of the Every Student Succeeds Act by President Obama in 2015.

Every Student Succeeds Act 2015

The Every Student Succeeds Act (ESSA) 2015, reflected President Obama's reauthorization of the Elementary and Secondary Education Act (ESEA) which

committed the nation to equal opportunities for all students. Additionally, ESSA reflects a continued commitment to ensure that states and schools focus on educational accountability. ESSA dictates that schools monitor and improve achievement outcomes and close achievement gaps. These expectations are consistent with the expectations enumerated by NCLB (Skinner, R. R., & Library of Congress, 2019). When compared to NCLB, ESSA sifted greater responsibility back to individual states. States were granted the authority to "develop, test, and measure academic metrics and standards…. ESSA expressly permits those states that previously adopted Common Core standards to withdraw and replace those academic standards" (Heise, 2017, p. 1872).

The Every Student Succeeds act stipulates that schools must dedicate themselves to advance equity, in particular equitable access and opportunity for disadvantaged/ high-needs students; create educational opportunities for all students to ensure that children become career and college ready; measure student progress toward educational goals via statewide assessments; improve performance in under-performing or low performing districts (U.S. Department of Education, 2015). When compared to NCLB, ESSA provided states with greater flexibility to set their own goals for student achievement within an established federal framework. NCLB focused strongly on student academic achievement on state assessments as the measure to evaluate school. ESSA expanded the evaluative criteria to include reading and math test scores, English language proficiency test scores, high school graduation rates, state selected measures of academic performance, and other school quality indicators including, but not limited to kindergarten readiness, access to and completion of advanced course work, college readiness, school climate and safety, and absenteeism. Finally, ESSA placed greater

emphasis on reading and literacy through the creation of a national center focused on literacy and reading issues. Additionally, a literacy education grant program was created to provide $160 million in available funds to states and schools to enhance evidence-based instruction on literacy skills (U.S. Department of Education, 2015).

The Federal Government's involvement in U.S. schools has been significant throughout the past 70 years. While the conditions that have prompted federal involvement has varied, consistent themes can be noted. The Federal Government's Legislative efforts referenced above consistently relate to themes including, but not limited to, the expanded use of technology, importance of parental involvement in schools, and improving academic achievement for students. Funding is consistently tied to educational reform efforts and serves as the catalyst to inspire state governments to address identified gaps. At the heart of both the Elementary and Secondary Education Act and No Child Left behind is the importance of community connections and the expectation that schools develop effective mechanisms to enfranchise parents and guardians through strengthened/improved lines of communication.

Parental Involvement/Engagement

A myriad of factors impacts the extent to which parents become engaged in the academic lives of their children. These factors include, but are not limited to, the parent's knowledge of classroom learning activities, the perceived level of communication available between schools and residences, parental self-efficacy, along with a variety of other factors. A parent's belief in their own ability to support the learning of their child relates directly to their own concept of self-efficacy, or the belief in the power of a given individual to affect a given outcome (Ames, 1993; Bandura, 1977; Hoover-Dempsey &

Sandler, 1997; Hoover-Dempsey & Sandler, 1995; Goodall & Montgomery, 2013).

According to Goodall and Montgomery, parent participation should be examined along a continuum, drawing distinctions between involvement and engagement.

Parent involvement is often defined by the extent to which parents participate in school activities, communicate with teachers, and volunteer (Hoover-Dempsey, 1995, 1997). However, "Parent engagement (also referred to as parent involvement and family engagement) is a complex and broadly defined term" (Gross, D. et al., 2020 p.747). As defined by the US Department of Education, parent engagement is "Regular, two-way and meaningful communication involving student academic learning and other school activities" (United States Department of Education, 2015). Goodall & Montgomery (2013) implore that schools should examine parental involvement along a continuum, examining the parent's role beyond merely attending meetings, volunteer, and/or communicate with teachers. There findings indicated that schools must enhance the parent's relationship to their child's learning ahead of the parent's relationship to the school itself.

Goodall and Montgomery (2013) present a distinction between parental involvement and parental engagement. The continuum proposed moves from parental involvement with school (as evidence by volunteerism, committee work, or efforts to contact teachers) to parent engagement with children's learning (as evidenced by efforts undertaken within the household to support the academic growth of their child). Children with involved parents have consistently demonstrated an ability to earn higher marks, improved attendance patterns, improved behavior and social skills and prove to adapt better to school. Such students tend to further their education, maintain enrollment in

secondary schools, and explore additional educational opportunities, beyond high school (Goodall & Montgomery, 2013). Ultimately, schools must recognize that a shift in thinking related to parent relationships with schools is required. Schools must shift "emphasis away from the relationship between parents and schools, to a focus on the relationship between parents and their children's learning. [This shift in thinking] represents a change in relational agency, with the relationship being between parents and schools and the object of the relationship being the children's learning" (Goodall & Montgomery, 2013 p. 2). Further, the Center for Disease Control and the National Association for Family, School and Community Engagement indicate that parent/guardian engagement reflects a shared responsibility to support a child's learning and development. These efforts extend beyond communication and expects parents to assume a more active role in support the academic development of their children, at home (Center for Disease control and Prevention, 2012; United States Department of Education, 2015). Hoover-Dempsey and Sandler (1997) further define the factors that motivate parents to become engaged in the academic/ school related affairs of their children.

Hoover-Dempsey and Sandler (1997) developed a theoretical model of parental involvement that addressed (a) why parents become involved in their child's education; (b) the forms of their involvement; (c) how their involvement influences both motivation and achievement. The work "utilized psychological theory and research critical to understanding why parents become involved in their children's elementary and secondary education" (Hoover-Dempsey & Sandler, 1997 p. 3). Their review suggests that parent

role construction and sense of efficacy play an integral role as it relates to parental effort to support their children's academic development (Hoover-Dempsey & Sandler, 1997).

The model delineates five levels that link parents' initial decisions to become involved in their children's education with student outcomes (Hoover-Dempsey & Sandler 1997; Anderson & Minke, 2007). The extent to which parents become involved in their children's education can be shaped by the following factors; *role construction*- e.g. the parents' beliefs personal beliefs about their responsibilities as parents toward their children's education; *Self-efficacy*- e.g. the parents beliefs that through involvement positive academic outcomes can be achieved; and *general invitations*- e.g. the extent to which schools provide opportunities, both subtly and overtly, that encourage parent involvement in schools (Hoover-Dempsey & Sandler 1997).

Building upon the work of Hoover-Dempsey & Sandler, Anderson and & Minke (2007) explored the relationship between role construction, sense of efficacy, resources, and perceptions of teacher invitations. Anderson & Minke surveyed elementary students from an urban district and determined that specific invitations from teachers to parents and parental role construction had the largest impact on parental involvement. Further, the study found that parents choose to become more or less involved in their children's schooling based on their own beliefs. These beliefs are guided by either their personal sense of efficacy and or a belief in role construction (Harris & Goodall, 2008; Anderson & Minke, 2007). As defined by Anderson & Minke 2007, role construction relates to the "parents; ideas about what they should do in relation to their children's school (e.g., their job as a parent). Parents with high role construction support a high level of involvement in their children's education" (Anderson & Minke, 2007 p.312). When parents recognize

that supporting and enhancing their child's academic achievement is part of their job, they are increasingly more engaged in school related affairs.

Parent involvement in the academic lives of their children is driven, in part, by parental sense of self-efficacy, the extent to which the parent believes that their efforts will yield positive academic outcomes, and the extent to which the parent feels invited into the academic environment (Ames, 1993; Anderson & Minke, 2007; Bandura, 1977, Harris & Goodall, 2008; Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey & Sandler, 1995; Goodall & Montgomery, 2013). Subsequent sections will further develop the factors that encourage parental involvement, conditions that encourage or dissuade parental involvement, and the associated benefits of parental involvement related to academic success indicators for children.

Motivations for Parental Involvement in Schools

Parent involvement in schools has proven to be a long-standing topic of study. Parents play an integral role in supporting, advancing, and developing their children academically and socially. A variety of research studies have been conducted to examine the role parents play related to involvement in schools and the factors that either encourage or dissuade involvement (Deslandes & Bertrand, 2005; Hoover- Dempsey & Sadler, 1997). These studies generally speak to the importance of parental self-efficacy, invitations from schools or students, and parental role construction.

Hoover-Dempsey & Sandler (1997) reviewed psychology theory related to parental involvement in the academic lives of children. They explored parent role construction, sense of efficacy, and general invitations from teachers/ schools to become involved in the academic lives of their children. "Parents role construction defines

parents' beliefs about what they are supposed to do in their children's education; parents' sense of efficacy for helping their children succeed in school focuses on the extent to which parents believe that through their involvement they can exert positive influence on educational outcomes; general invitations refer to parents' perceptions that the child and school want them to be involved" (Hoover-Dempsey & Sandler, 1997 p. 3). For example, the parents' beliefs about their own capacity to influence and support the academic development of their children. The findings of this study indicate that parental role construction and parental sense of self-efficacy factor more heavily on parental involvement. Schools can design programming to enfranchise parents into the school community, however such efforts will have less impact than factors related to parental self-efficacy and parental role-construction.

Similarly, Deslandes & Bertrand (2005) conducted a qualitative study using survey data from 770 parents of adolescents in 5 secondary schools. 354 parents of 7th graders, 231 parents of 8th graders, and 185 parents of 9th graders. Their study was designed to explore topics related to; parental role construction, parental self-efficacy related to supporting their children academically, parental perceptions of teacher invitations received to support the work of schools, and parental perceptions of student invitations to support academic course work. The findings indicated that "the most outstanding pattern is the greater influence of parents' role construction. Parents must comprehend that parent involvement at schools is part of their responsibilities before they decide to become involved." Additionally, the findings indicate that both teacher and student invitations for parental involvement influence parental behavior (Deslandes & Bertrand, 2005).

Factors that Encourage Parental Involvement

A myriad of factors encourages parents to become involved in the academic lives of their children. These factors include effectiveness of communication, timeliness of communication, along with the 'type' of communication presented from schools to residences (Ames, 1993; Epstein 1986, 1990; Olmstead, 2013). A study conducted by Christine Olmstead (2013) utilized both qualitative and quantitative data related to parent and teacher perceptions of student achievement as it relates to electronic communications between parents and schools. Data was collected through survey instruments and semi-structured focus group interviews. The study included parents and teachers of children in grades 4 to 6 in North Orange County California. The findings indicated that when parents receive useful, meaningful, and positive communications from teachers and staff, the nature of the relationship between schools and households improve. The learning of the child is prioritized and the parents' belief in their own ability to support learning, at home, improves (Olmstead, 2013). These findings support work previously established by Epstein (1986, 1990).

Communication between parents and schools has proven to have a positive impact on academic achievement. However, concerns exist related to the "type" of communication that is delivered and the manner with which it is conveyed. Epstein (1986) used survey data from 1,269 parents of students in 82 primary and intermediate level classrooms in Maryland schools related to parent's involvement practices utilized by teachers when communicating with parents. The findings indicated that when communications between school and home are negative in nature, convey little classroom-related instructional information, and fail to establish a meaningful connection

between teachers and parents, a deleterious impact may be realized. When school to home communications are structured appropriately, they provide useful information to aide parents and advance their knowledge about their children's learning activities. Additionally, when such communications advance the parents understanding of their child's positive attributes and academic progress, and include details related to the actionable steps a parent may explore to support their child, meaningful communication has occurred. Such communications create "knowledgeable partners," and enhance a parent's level of confidence in the school and fosters interest in both their child's academic progress and learning (Ames, 1993; Epstein 1990).

As part of a larger longitudinal study on school to home communications, (Ames, 1993) examined the relationship between teachers' school to home communications and parental perceptions, involvement, and children's motivation. This study included 25 teachers and used three categories of school to home communications; (1) providing parents with information about classroom work and practices; (2) providing parents with information about their child's work and progress; and (3) providing parents with support in working with their child at home. Students in each teacher's classroom served as the child sample, while the parents of these children served as the parent sample. The findings suggest that both the frequency and the content of school to home communication are important (Ames 1993)

Parental Involvement in Practice.

School to home partnerships have proven to yield positive academic results for students. Parents may choose to become involved in schools through their involvement in

a variety of programs. The establishment of school to home partnerships creates

conditions for the success for contributing stakeholders, e.g., teachers, administrators,

parents, and students (Ames, 1993; Epstein 1995; Graham-Clay, 2005). Schools play a

pivotal role in building relationships. Parents may provide home based involvement,

supporting with the completion of assignment, monitoring task completion, and providing

other degrees of support to their children (Hoover-Dempsey & Sadler, 1995).

As part of a larger longitudinal study, (Ames 1993) examined the relationship

between teachers' school to home communications and parent perceptions, involvement,

and child related motivation related outcomes. Participating second and fourth grade

teachers engaged in three categories of school to home communication. These

communications included, informational communications about classroom work and

practices; informational communications related to the parent's individual child; and

informational communications related to supporting the child academically, at home. The

findings of the study indicated that both the frequency of school to home communication

and the content of such communications prove important (Ames, 1993). The study

additionally found that parent involvement can be enhanced when school to home

communication provides information about the student as a learner, improves parent's

efficacy, and builds comfort between the parent and the school (Ames, 1993).

Parent involvement in school can be defined in several ways including, but not

limited to, participation in school related governance, volunteer work within a given

school building, supporting academic work within the home, attending parent teacher

conferences and school activities, membership in parent teacher organizations, etc.

Through their actions, the way they speak about academics, the extent to which they

assist their children with schoolwork, and degree to which they monitor academic progress, parents play a pivotal role in their child's academic achievement. While the above reflects home based processes designed to support schools, growing scholarship speaks to the degree to which schools effectively relate to/ connect with parents influences the degree to which parents choose to engage/ remain in engaged in supporting their children's academic progress (Ames, 1993). Building upon Ames, Epstein (1995) further detailed actionable steps schools should support to enfranchise parents into school communities.

Epstein (1995) postulated that there are three spheres of influence related to schools. These spheres include the schools, the community, and the family. Some schools make intentional efforts to ensure that these three spheres overlap, while others do not. "Schools make choices. They might conduct only a few communications and interactions with families and communities, keeping the three spheres of influence that directly affect student learning and development relatively separate. Alternatively, they might conduct many high-quality communications and interactions designed to bring all three spheres of influence closer together. With frequent interactions between schools, families, and communities, more students are more likely to receive common messages from various people about the importance of school, of working hard, of thinking creatively, of helping one another and of staying in school" (Epstein, p. 702). When the three spheres of influence coalesce, families reinforce the importance of school, homework and activities and build upon student skills and success. Communities create school-like opportunities and events that reward students for progress and excellence. Susan Graham-Clay (2005) echoed similar sentiments, "strong communication is fundamental to this partnership and

to building a sense of community between home and school" (p. 117). Communities work toward creating family-like settings and service events that enable families to better support their children. The integration of the three distinct spheres serves to provide students with consistency in messaging and accentuates the importance of schooling.

When school to home partnerships are cultivated, educators and parents recognize their shared interests and responsibilities for children. These common understandings serve as a platform to create better programs and educational opportunities for children. According to Epstein (1995), school to home partnerships "can improve school programs and school climate, provide family services and support, increase parents' skills and leadership, connect families with others in school and in the community, and help teachers with their work. However, the main reason to create such partnerships is to help all youngsters succeed in school and in later life. When parents, teachers, students, and others view one another as partners in education a caring community forms around students and begins its work" (p. 701).

While there are known benefits to parental involvement in the academic lives of children, teacher perceptions related to parental involvement in schools is discussed in the following section.

Teacher Perspective on Parental School Involvement.

Teachers report two distinctly different opinions related to the role that parents play in the academic lives of their children. One opinion is rooted in the belief that parents play an integral role as partners in school related matters of their children, while the other assumes that parents assume a more differential role to school officials related

to academic matters (Broderick & Mastrilli, 1997; Epstein, 1986, 1995; Lazar, et al., 1999). From the teacher's perspective, two distinctly different perspectives have emerged related to the role that parents play in supporting their child's academic development. One perspective is grounded in a belief that competition and conflict exist between schools and families. This perspective supports a separation between schools and home and assumes that the school bureaucracy is responsible for setting an academic vision and for supporting students toward attainment of said vision. In this model, teachers manage their classrooms, make professional judgements about children and parents are expected to maintain their positions about children at home. In this model, attitudes from parents may include, "I raised the child, now it is your job to educate [them]," while educators may state, "If the family would just do their job, we could do our job" (Epstein, 1995, p. 703). Such polarizing convictions serve to erode any effort to bridge a communication gap and disrupts efforts to forge meaningful partnerships between schools and homes (Epstein, 1986).

Conversely, the alternative view recognizes the value in cooperation and the establishment of a complimentary relationship between schools and families. This model promotes communication and collaboration between the two intuitions (schools and homes). In this model, attitudes from parents may include, "I really need to know what is happening in school to help my child," while educators may state, "I cannot do my job without the help of my students' families and the support of the community" (Epstein, 1995, p. 703). The assumption being that schools and families share a collective responsibility to socialize children. Teachers and parents tend to emphasize the precepts of one of the above philosophies (Epstein, 1986).

A study conducted by Lazar et al., (1999), surveyed 148 teachers representing elementary and secondary levels in Philadelphia schools to determine the extent to which teacher preparation programs prepared them to ensure meaningful parent involvement. Specifically, teachers were asked to indicate if they had received schooling on parent involvement, in what context they received the information, and their perceived needs for greater professional development in this area. This study indicated that while seventy percent of elementary school teachers received some informational training on parent involvement, only 45% of secondary teachers received such information (Broderick & Mastrilli, 1997). Nearly all teachers involved in this study indicated that there was a need for additional education in the following areas of parent involvement; collaborating with parents, communication with parents, understanding parents' perspectives, conducting parent conferences, and sharing in governance with parents (Lazar et al., 1999). Graham-Clay (2005) found that "Many teachers are not specifically trained in the skill they need to communicate effectively with parents" (Graham-Clay, p. 118). The study by Lazar et al., (1999), indicated that greater attention to parent engagement should be explored in preservice teacher development programs. Caspe (2003) suggested that teacher preparation and professional development must actively develop communication skills for teachers.

Effective school to home communication serves to advance parental participation in both school and the academic lives of their children. The type of communication that serves to enhance parental participation in schools tends to be positive in nature, provides information about classroom instructional practices, creates connections between teachers and parents, provides progress updates related to student performance and affords parents

with strategies for supporting their children at home with academic work (Ames, 1993; Epstein, 1985, 1990; Olmstead, 2013). Despite these common understandings, there are several factors that serve to reduce parental participation in schools. These factors include parental disenfranchisement, diminished trust between residences and schools, socioeconomic factors, language barriers, previous negative encounters with schools or school officials, and a host of other factors (Anderson & Minke, 2007; Brandt, 1998; Finders & Lewis, 1994; Graham-Clay, 2005; Harris & Goodall, 2008; Henderson & Mapp, 2002; Jackson, 2011).

Proactive efforts, supporting a child's education at home have shown positive results on student performance. The extent to which schools and families recognize the importance of merging spheres of influence (home, community, and schools) proves to be an essential element related to the quality communication between schools and residences. Despite this understanding, principals and teachers report that a lack of parent involvement continues to present an obstacle related to increasing overall student achievement. Factors that tend to dissuade/ discourage parental involvement are discussed in the following section.

Factors that Discourage Parental Involvement

Some of the commonly cited barriers to parental involvement include, but are not limited to, intimidation, language barriers, a lack of understanding relative to the role a parent should assumed, and frequent negative contacts with school officials, e.g., the school contacting parents only when an issue has presented itself. Other barriers to parent involvement, e.g., a lack of transportation, limited availability related to the parent's

work schedule, or a lack of competency related to supporting academic tasks at home as the content proves too challenging (Colombo, 2004; Flynn & Nolan, 2008; Hoover-Dempsey et al., 2005; Hoover-Dempsey et al., 2002; Taffel, 2001). In addition, parent involvement in schools may be limited because of limited faith in the school system, helplessness, or negative personal school related experiences that parents had as students (Bemak & Cornely, 2002). Still other barriers are presented by insufficient teacher training related to parent involvement and parents' perceptions that they do not possesses the personal acumen to join school-based committees or volunteer opportunities (Barnyak et al., 2009).

Harris & Goodall (2008) engaged in a 12-month research project designed to "explore the relationship between innovative work with parents and the subsequent impact upon student achievement. The aim of the research was to capture the views and voices of parents, students, and teachers to explore barriers to parental engagement and respective benefits to learning" (Harris & Goodall, 2008 p. 277). The study utilized a qualitative case study design that included data from 20 schools and 314 respondents in conjunction with documentary evidence from participating schools. The findings indicated that several social and economic factors prevent parents from participating in schooling. While parental involvement remains a useful lever for children, effectively communicating with parents and accessing this known resource requires targeted efforts and commitment from both parents and schools. The study indicated that while involving parents in school related activities is important, as a community function, parental engagement in learning at home creates greater academic success conditions for students (Harris & Goodall, 2008).

Barriers to communication between educators and parents can be found at several levels. Brandt (1998) found that in general, the public is becoming increasingly estranged from institutions, and schools have become the target of negative reports. Taffel (2001) reported that many parents feel unsupported and overwhelmed by the demands placed upon them at home. Colombo (2004) found that cultural differences can serve to create communication challenges when teachers use their own cultural experiences and lenses to interact with others from more diverse settings.

Parental Experiences.

From a parent's perspective, their own experiences in school (negative experiences in particular) may affect their relationships with school officials. Additionally, the nature of the communications from schools to households proves important to the establishment of engaged parent participation in schools. In many cases, parent involvement is driven by previous experiences with schools and the perceived effectiveness of school to home communications (Ames, 1993; Graham-Clay, 2005; Jackson, 2011; McDermott & Rothenberg, 2001). Jackson (2011) posits that some parents may feel inferior when they compare themselves to teachers and members of the school staff. This inferiority complex creates conditions where the parent may feel judged and negatively stereotyped, thus their involvement in schools becomes increasingly limited (Jackson, 2011). Some parents may simply not know or understand how to interact with the school bureaucracy (Graham-Clay, 2005).

When school to home communication portrays a student negatively and routinely highlights the challenges a child is facing in a school, the school to home relationship may become strained and overall parent investment is likely to diminish. When

communications contain information that influences parents' perceptions of their child as a learner, improve the parent's sense of efficacy, and advance the parents level of comfort within schools, then parent involvement may be enhanced (Ames, 1993). It proves imperative that educators identify best practice approaches related to communicating with parents and create a bridge between schools and residences (McDermott & Rothenberg, 2001).

Socioeconomics.

From a socioeconomic standpoint, degrees of parent involvement can be influenced by economic status. Middle-class families, those with more flexible work schedules and greater access to transportation may find it easier to be available and or present at the school (Anderson & Minke, 2007). Conversely, parents with job related duties that conflict with school related matters, childcare difficulties, or other work responsibilities that preclude a parent from participating in school activities, create challenges for the economically less fortunate (Harris et al., 2008). There is evidence to support the notion that parental engagement increases with social status. Parents are more likely to engage in learning and face fewer barriers as their social status increases (Harris & Goodall, 2008). Finders & Lewis (1994) found that, both economic and time constraints served as obstacles to effective communication between parents and schools. Parent involvement tends to be higher in rates commensurate with increased levels of income and education (Ames, 1993).

A study conducted by Benson (1984) examined the difference between the family/school interactions of working-class families and middle-class families. This study focused on two schools one of which catered to working class families while the other

included families identified as affluent. The study utilized participant observation along with interviews of teachers and parents. The findings although limited in scope (because of a small sample size) indicated that all students, regardless of their socio-economic status, benefit from increased degrees of parental involvement in their schooling (Benson, 1984).

Henderson & Mapp (2002) found families from all backgrounds are known to be engaged with their children's learning, however evidence indicates that white, middle-class parents are more likely to be involved in a relationship with the child's school (Henderson & Mapp, 2002). Conversely, in a study conducted by Sui-Chu & Willems (1996) the findings indicated that there was little support for the notion that parents of low socioeconomic status are less involved in their children's school when compared to parents from higher socioeconomic status. The study further found that while schools varied in parental involvement related to volunteering and attending meetings of parent-teacher organizations, they did not vary as substantially in levels of involvement as evidenced by home supervision, discussion of school activities or parent to teacher communication. Data points for the study included National Education Longitudinal Study (NELS) including 24, 599 eighth-grade students and their parents and teachers (Sui-Chu & Willems, 1996 p. 130).

Parental Involvement Shifts as Students Mature.

Parent involvement patterns tend to shift as students mature through their school age years. In general, parents tend to be more involved during the primary/ intermediate school years and then begin to withdraw as students become more academically and socially mature (Clark Brown 1989; Dwyer & Hecht, 1992; Epstein, 2010; Albert

Holliday, 1986; Spera, 2005). Dwyer and Hecht (1992) reviewed literature related to

parent involvement in schools. In the primary/ intermediate years, parents take an active

role as field trip supervisors, class parents, class aides, school to community event

coordinators, etc. Then during junior and senior high school, parental involvement shifts

toward advising and/or administrating as adolescents seek autonomy and begin to assume

increased ownership of their academic lives (Dwyer & Hecht, 1992).

There are any number of reasons that may contribute to a lack of parent

involvement in the school related lives of their children. Patricia Clark Brown (1989)

outlined the following reasons for diminished parent involvement in school related

matters:

1. Lack of time. Working parents are often unable to attend school events during the day.
2. Feelings of inadequacy. For many parents, schools were not a positive experience. They may feel they do not possess the skills to help.
3. Overstepping their bounds. Confident parents may feel they should not "interfere" with the school's business. (p.3)

Albert Holliday (1986) expanded upon the above and added:

4. School's organizational structure does not lend itself to sustained parent-teacher contact.
5. Adolescents are increasingly independent and may resist when parents attempt to become involved. (p.7)

As children mature through their school ages and become increasingly more

autonomous, parent involvement begins to decline. Spera (2005) conducted a

comprehensive literature review related to parenting practices, parenting styles, and

student achievement. The findings indicated that "when parents are involved in their

children's education and monitor their children's after-school activities, they facilitate

their children's academic achievement and educational attainment. However, several

studies report a decline in parental involvement during the middle school years" (Spera,

2005 p. 141). As a child moves from elementary school to secondary schools, parents tend to become less invested in schools (Spera, 2005). The parent-student relationship shifts with maturation; as children strive for greater degrees of independence and establish their own identity, parents assume more passive roles in their academic lives. A study conducted by Epstein (2010) relied on the use of "surveys and field studies involving teachers, parents, and students at the elementary middle and high school levels, some important patterns related to partnerships have emerged" (Epstein, 2010 p. 84). The partnership patterns indicate some observable trends. These trends included a general decline in partnerships (between schools and homes) as students' progress through their years of schooling; affluent communities tend to have more positive family involvement; economically depressed communities, schools tend to make more frequent contacts to residences to share problems related to a child's behavior or progress; single parents tend to be less involved in the school building (Epstein, 1995). Given the known benefits of parent involvement in schools, it proves essential to further develop the manner with which parents become involved in schools.

Associated Benefits of Parent Involvement

Parent involvement has been associated with positive behavioral and academic outcomes including, increased self-regulatory behavior and higher social functioning skills. Parent involvement may also increase children's confidence in their own abilities as well as their interest in learning. Academic outcomes are similarly enhanced when parents are actively involved as parent involvement has been associated with positive academic outcomes, including increased academic performance, lower rates of retention and failure and reduced special education placements (Fan & Chen, 2001; Jeynes, 2007;

49

Henderson & Berla, 1994; Henderson & Mapp, 2002; Hoover-Dempsey & Sandler;

Patrikakou, 2015).

Greater parental involvement yields positive academic outcomes for students.

Students tend to perform better academically when relationships between parents and

teachers/schools are well established. Parents can play an integral role in advancing

student's perceptions and sense of self-efficacy in their children.

> Parents who are involved in their children's education in ways that create or
> reinforce direct experiences of educational success offer verbal persuasion
> intended to develop attitudes, behaviors, and efforts consistent with school
> success, and create emotional arousal that underscores the personal importance of
> doing well in school are more likely to develop a strong, positive sense of efficacy
> for successfully achieving in school-related tasks than students whose parents are
> not involved. (Hoover-Dempsey & Sandler, 1995, p. 315)

When parents take an active role in their child's schools, positive family-school

partnerships can be cultivated/established (Fan & Chen, 2001; Jeynes, 2007). Fan &

Chen (2001) conducted a quantitative meta-analysis designed to synthesize the

quantitative literature relative the relationship between parental involvement and student

academic achievement. Their findings indicate "a small to moderate, and practically

meaningful, relationship between parental involvement and academic achievement" (Fan

& Chen, 2001 p. 1). This study revealed that there was a relationship between parental

involvement and academic achievement when tied to an indicator of academic

achievement, such as Grade Point Average (GPA). Additionally, the study indicated that

parent supervision had limited impact on student achievement. However, the study

revealed that parent aspiration/expectations related to student achievement had a strong

relationship with the student's positive academic achievement. Jeynes (2007) further

developed the impact of parental involvement on academics in 2007.

Jeynes (2007) conducted a meta-analysis that included 52 studies to determine the impact parental involvement had on achievement related to urban secondary level school children. This study utilized four different measures related to educational outcomes: all components of academic achievement; grades; standardized tests; other measures including teacher rating scales. The results indicated that the influence of parental involvement on students was significant. The findings indicated that "parental involvement is associated with higher achievement for students of racial minority and for both boys and girls" (Jeynes, 2007 p. 247). The study conducted by Jeyne's substantiated "the findings of Fan and Chen (2001) that indicate[ed] a strong relationship between parental involvement and academic outcomes" (Fan & Chen, 2007 p. 60).

Henderson & Berla (1994) conducted a comprehensive literature review including 66 studies, reviews, reports, analyses, and books. Their research was conducted to identify relevant studies related to student achievement and the extent to which the family was involved in a child's education. Their findings present a collection of research papers on the function and importance of family involvement to a student's achievement and education in school. The findings indicate that families play a critical role in contributing to student achievement from early childhood through high school and academic outcomes can be enhanced when parents are actively involved (Henderson & Berla, 1994).

Henderson & Mapp (2002) examined the growing evidence that family and community connections can lead to greater student success. Staff at the Southwest Educational Development Laboratory (SEDL) identified 80 research studies and literature reviews related to the influence of family and community involvement on student academic achievement outcomes. "The evidence [was] consistent, positive, and

51

convincing; families have a major influence on their children's achievement in school and through life. When schools, families, and community groups work together to support learning, children tend to do better in school, stay in school longer, and like school more" (Henderson & Mapp, p.7).

Parents who monitor their student's schoolwork and daily activities, communicate frequently with teachers, and support their children with developing post schooling plans are more likely to have students who graduate from high school and pursue education beyond high school. Parents play a critical role in contributing to student achievement from early childhood through high school. When parents are actively involved in their children's education, students earn higher grades, test scores, enroll in higher-level programs, pass their classes, earn credit, attend school regularly, have better social skills, demonstrate improved behavior, adapt well to school, graduate, and go on to postsecondary education (Henderson & Mapp, 2002). As schools develop and advance the use of technology for the purpose of data management and communication, the relationship between schools and households grows more increasingly important.

Patrikakou (2015) discussed the relationship between technology and the impact of electronic media on families and schools. Patrikakou states that "in an era of rapidly evolving demands for technology use in schools, establishing school-family partnerships extends beyond facilitating two-way communication and information dissemination. The extended use of technology in schools includes the assumption that technology-based student learning will extend to home, as students are asked to use technology to complete homework, or in a flipped classroom format. Under this assumption, fostering school-family partnerships assumes an even more important function" (Patrikakou, 2015 p.

3357). As student information systems and the accessibility to school related content and information continues to become more readily available, partnerships between schools and households grows increasingly more pivotal.

School to Home Communication

Communication between schools and households is an essential aspect of education. School to home communication is necessary for establishing a strong school community. Effective communication between schools and households serves to positively impact parent involvement in the academic lives of children as well as parent involvement in the schools themselves (Bergman, 2012; Galindo & Sheldon, 2012; Kraft & Dougherty, 2013; Sheldon et al., 2010). Operationally defining communication is essential to this study. Goodall (2016) defined communication as "a signal passed from one person to another; a signal which the second person is capable of understanding and to which they could, potentially respond" (p. 119).

One Way vs. Two Way Communication

There is a myriad of ways schools communicate with households. Communication can be formal, informal, one-way, or two-way. Communication may involve the impression created or the words expressed when parents enter a school building. Communication begins with the welcome sign a parent sees or the greeting received (or absent) from members of the office staff. The environment that the school presents will impact the extent to which parents feel welcomed and comfortable to participate/ attend school programs, events, or other activities (Barnyak & McNelly, 2009). Parents may be influenced by the cleanliness of the school grounds, student

artwork on the walls, or the sounds in the hallways. Friendly school environments reflect the extent to which schools value communication with members of the community (Chambers, 1998).

Explicitly expressed communication may include either one-way or two-way exchanges. One-way exchanges are defined as those that inform parents of school related matters. These informational communications often take the form of newsletters, report cards, radio announcements, school web sites, etc. Two-way communication methods require dialogue between teachers and parents. Such measures may include parent-teacher conferences, open houses, and other school-based community activities (Berger, 1991).

Susan Graham- Clay (2005) reviewed relevant literature related to communication opportunities available to teachers, use of communication technology, practical suggestions to promote parental involvement, and potential barriers to parental participation. Graham-Clay's findings of this literature review indicate that many teachers lack adequate training and fail to proactively communicate with parents. Graham-Clay attests that, one-way communication, in particular, messaging to homes via letters has proven to be an effective communication measure for schools. Letters sent from schools are designed to be organized, concise, and accurate and serve to provide parents with details regarding school proceedings in a succinct manner (Graham-Clay, 2005). Newsletters often serve to bridge communication gaps between schools and home and are most useful when they are created with a degree of uniformity (layout, format, color, quality, size, etc.), written for readability (level of sixth grade or lower), and provide descriptive information for parents (Chambers, 1998). Report cards have been

utilized as a traditional mode to convey permanent, written, and evaluative information

relative to student progress. In serving as a communication method, report cards should

be clear and easy to understand, provide information about academic development across

content areas, and include suggestions for parents to support their Childs academic/ social

development (Aronson, 1995). Such forms of communication with parents are designed

to keep parents informed and to share information about either the school or classroom

events (Laho, 2019). Alternatively, two-way communication is increasingly more

interactive and tends to provide increased levels of personalization between schools and

households.

Two-way communication occurs when teachers and parents have a dialogue with

one another. Effective dialogue "develops out of a growing trust, a mutuality of concern,

and an appreciation of contrasting perspectives" (Lawrence-Lightfoot, 2004). Two-way

communication between schools and households may take many different forms. Such

communication vehicles may include phone calls, text messages, parent-teacher

meetings, emails, etc. In a study conducted in 2013, Ho et al., examined teacher behavior

related to adopting mobile phone messages as a parent-teacher communication tool. The

foundation of this study was a comprehensive literature review designed to explore an

identified gap that related to parent-teacher communications using electronic platforms.

As posited by Ho et al., existing research "often adopt interview designs and use

statistical analyzes to examine both the influences of such communication and causes of

conflict; discussion of e-communication behaviors between parents and teachers are rare"

Ho et al., 2013, p. 106). The findings of this literature review indicated that teacher

attitude must be treated as "a mediator between perceived usefulness and behavior

intention, even if the user perceives the new device is useful but does not hold a positive attitude toward the device" (Ho, et al., 2013, p.2). Additionally, the study indicated that attitudes and perceptions influence the extent to which electronic messaging systems are utilized. Further, the study revealed that student academic performance along with social competence could be influenced positively by parent involvement. Ho et al., (2013) postulate that school to home communication is "a process that exchanges information to develop consensus, coordinate action, fulfil stakeholder needs, and achieve effective learning goals" (Ho et al., 2016 p. 106). Based on these findings, the researcher postulates teacher, administrator, and parent perceptions related to the Infinite Campus Parent Portal will impact the frequency and patterns of usage.

Parents, teachers, and students are growing increasingly more accustomed and receptive to using technology to communicate regarding school performance (Grant, 2011). A study conducted by Christine Olmstead (2013) utilized both qualitative and quantitative data related to parent and teacher perceptions of student achievement as it relates to electronic communications between parents and schools. Data was collected through survey instruments and semi-structured focus group interviews that included parents and teachers of children in grades 4 to 6 in North Orange County California. According to Olmstead (2013), "schools should be seeking ways to maximize emerging technological tools to promote better communication between teachers and parents" (p.30). In the recent decade, schools have increasingly adopted learning management systems, including but not limited to, Google Classroom, Canvas, Moodle, etc., to support increased communication between schools and households.

Schools have historically relied on letters via physical mail, parent teacher conferences, open houses, parent teacher organizations, newsletters, and a variety of other communication vehicles including, but not limited to, emails, automated phone calls, building websites, teacher websites and most recently data management systems to increase the extent to which parents are apprised of school related activities and developments. Increasingly, schools have capitalized on technology by turning to the Parent Portal component of student information systems. The software programs utilized by schools, to manage student data, serve as both a communication tools and may solidify the partnership between home and school (Graham-Clay, 2005; Goodall 2016).

While the use of learning management systems has proliferated throughout the past decade or more, few studies have been conducted related to the extent to which these tools advance lines of communication between schools and residences. Goodall (2016) found that while there is an abundance of research on the pedagogical impacts of such learning management systems, limited scholarship has been developed related to the extent to which such systems support increased communication between learning organizations and households. Studies, such as those conducted by Laho (2019), Ozdamli & Yildiz (2017), and Tyson (2020), were designed to examine this dearth in the scholarship.

A quantitative study conducted by Laho (2019), sought to examine teachers' and parents' perceptions of the use of learning management systems for the purposes of school to home communication. Using a survey method, 901 families and 83 teachers in a rural Michigan district were provided surveys. The data revealed that survey respondents were comfortable using digital tools to communicate, however, emails and phone calls

continued to reflect the most frequently utilized and preferred method of two-way communication. Further, the study indicated that the learner management system adequately served as a vehicle to keep parents informed about their child's academic progress. Additionally, the learner management system served as a central location for a variety of resources and information (Laho, 2019).

On a similar path, a study conducted by Tyson (2020), was designed to gain an understanding of the perceptions of elementary teachers about the use of web-based technologies for parent-teacher communication, and obstacles encountered. This qualitative, case study design, surveyed rural South Georgia elementary school teachers via convenience sampling. The findings indicated that elementary school teachers demonstrated positive attitudes toward the use of web-based technology to communicate with parents. The findings indicated that teachers were willing to use communication technologies to advance lines of communication with parents/guardians. Additionally, the findings indicated that the use of technology to communicate with parents was beneficial to the students and can serve as a meaningful way to further enfranchise parents/guardians into the school community (Tyson, 2020). A further investigation of the use of technology for the purposes of school to home communication was conducted by Ozdamli and Yildiz (2017).

Ozdamli and Yildiz (2017) conducted a mixed method study that included 790 parents and relied upon survey data to determine parental opinion on the usage of technology to enhance communication between schools and residences. The findings indicated that the use of technology to enhance school to family cooperation is essential (Ozdamli & Yildiz, 2017). Collectively, these two studies indicated that teachers possess

a willingness to utilize technology to communicate with parents and that parents have interest in using technology to become further involved in the academic lives of their children (Ozdamli & Yildiz, 2017; Tyson, 2020).

The research indicates that a variety of communication methods are available to schools. These communication methods take the form of both one-way and two-way communication vehicles. Recently, internet technology has been used as a tool to communicate messages from schools to parents and the community. "Increasingly, school web sites are used to convey a broad range of school information. Students often become involved with both the technology and the content of the web site and may work together with teachers to create and maintain the site" (Graham-Clay, 2005, p. 123). As new communication technologies emerge, it proves critical to further explore the teacher, administrator, and parent perceptions of new technologies, in particular the Student Information System, Infinite Campus, and the application of the Parent Portal features included therein, as a communication vehicle.

Student Information Systems

Student information systems (SIS) have become increasingly popular over the course of the past 15 years. Prior to the widespread application of student information systems, parents had to rely on parent teacher conferences that were often 'too late' in addressing an underlining academic need of a particular student, grade reports via report cards, or other informal teacher provided methods. The advancement of SIS systems serves to make parent/teacher conferences significantly more meaningful, as targeted

discussions on specific assignments can advance the collective understanding of academic concerns (Seldow, 2010).

Popular SIS include PowerSchool, Skyward, Gradelink, and Infinite Campus. Descriptions of the services provided each platform are provided below:

PowerSchool SIS is designed to "Improve communications and engagement with families, students, teachers, and schools. [The] Highly rated mobile app- PowerSchool Mobile- and online parent and student portals ensure that everyone is in the loop on student performance" (PowerSchool, 2019). As reported by their website, PowerSchool is designed to improve communications and engagement with families, students, teachers, and schools. Additionally, PowerSchool is reported to "Improve daily operations, boost administrative productivity, identify problem areas, and ensure funding with easy reporting" (PowerSchool, 2019). The platform serves to support a variety of administrative needs including, but not limited to, scheduling, attendance, state compliance reporting, data management, faculty management, health management, and registration.

The use of Skyward "Opens a new door for collaboration with parents. [By getting the schools] messages in front of everyone who needs to see it, students are empowered" (Skyward, 2019). Skyward reports that their SIS is more than just an online report card, rather they present a "Whole-child view of progress, intervention and aspirations" (Skyward, 2019). Their SIS presents the user with alerts for attendance, grades, and missing assignments. Parents are invited to register their children for classes and pay any fees associated with their students schooling. Additionally, Skyward supports a variety of administrative needs including, but not limited to, scheduling, report

60

cards, curriculum management, enrollment/registration, fee management, curriculum tools, etc. (Skyward, 2019).

The use of Gradelink, affords the user with "Automatic grade monitoring alerts, sports eligibility reporting, professional-looking report cards customized for [the] school, robust calendars, class web pages, school websites, mobile applications, group emails, SMS/text and voice alerts, and automatic grade and attendance monitoring" (Gradelink, 2019). Additionally, Gradelink supports a variety of administrative needs including, but not limited to, scheduling, report cards, customized grade scales, behavior modules, and communication features (Gradelink, 2019).

Infinite Campus, as defined by the software company Infinite Campus, Campus is designed to "Support student learning by ensuring school districts streamline educational processes, promote stakeholder collaboration and personalize learning. Our service organization easily manages implementations, trains new and existing customers and provides districts with support" (Infinite Campus, 2019). Infinite Campus supports a variety of administrative needs including, but not limited to, scheduling, report cards, behavior modules, and other learning management tools including quick assessments, score analysis tools, and mechanisms to share lesson plans.

The functions and features included in each Student Information system are quite similar. Namely, these systems are designed to stream-line the administrative side of school operations (scheduling, reporting, record management) while providing parents access to real time information relative to student performance. Each student information provides parents access to student performance (grades) via an electronic interface through a secure website or mobile application. While each platform offers users

(administrators, parents, and students) with different functions and features, there is commonalities within the communication feature of each platform.

The potential positives and negatives associated with the use of student information systems, as evidenced in the literature, is further defined below.

Proliferation, Benefits, and Detriments

Proliferation.

Widespread application and use of on-line gradebooks was bolstered by (1) the No Child Left Behind Act's inaugural definition of parent involvement… and (2) the requirement that school districts applying for Title II funds must have in place a process for effective use of technology to promote parent involvement and increase home-school communication" (Greitz Miller et al., 2016. p.46; Darby & Hughes, 2005). With the passage of No Child Left Behind (NCLB), greater responsibilities were placed on schools to record, track, and transmit data relative to student achievement and performance. With these increased expectations on schools, SIS's have become the standard mechanism for satisfying some of the NCLB mandates (McIntire, 2004). While the benefits of these technologies have been established (Bird, 2006; Darby & Hughes, 2005; Greitz Miller et al.; McIntire, 2004) potential detriments to such technologies have been identified (Geddes, 2009; Greitz Miller et al., 2016; Lacina, 2006; Lahey, 2013; Lahey 2017; McKenna, 2016; Olmstead 2013).

Benefits.

On-line gradebooks afford parents, teachers, and students with 24/7 access to grades and have become the prevailing method for communicating academic progress with parents (Greitz Miller et al., 2016). In a quantitative study conducted between May and December of 2014, Greitz Miller et al., examined over 400 online comments and quotes related to the use of online grade books (student information systems). "Multiple independent readings of the comments were performed using three readers who grouped comments based on commonalities within the expressed sentiments and experiences. Additionally, if the author's role (parent, teacher, and student) were mentioned or could be inferred contextually from the comment, it was noted for later use" (Greitz Miller et al., 2016 p.51). The information obtained was then codified using the existing theoretical frameworks of dialectical tension, parenting psychology, and systems theory. Comments were then categorized using these frameworks. The findings indicated that online grade books serve an important role in transmitting information.

Student Information Systems provide a useful mechanism for parents to monitor student performance while preserving a degree of student autonomy; essentially allowing parents to intervene when needed. Bird (2006) maintains that "today, the same parents who relied on fragmented, selectively edited explanations from the child can access this information, unabridged, on a daily basis from the SIS" (Bird, 2006. p.40). The use of an electronic grade book in schools can serve as a useful tool to help improve parental involvement (Reed, 2008). Student information systems provide parents and guardians with "online progress [monitoring], grade reports, and a systematic way of monitoring their children's school performance. [They] foster direct communication between parents and teachers through posted links that parents can access if they have questions regarding

their child's progress (Patrikakou, 2015 p. 2257). Communication between schools and parents, which is frequent, has been associated with positive academic outcomes (Moore, 2015). Through online access to student information systems, parents, students, teachers, and administrators have access to real-time student achievement with the click of a button.

One of the central benefits that online student information systems present to students relates to the anywhere/ anytime access that such platforms afford. In contrast to traditional gradebooks, enhanced insights related to classroom performance are readily available to students. Students are presented with the opportunity to view their grades as frequently, or infrequently, as they may desire (Juedes, 2003; Juedes, 2005; Schrand, 2008). The frequent access to student information systems serves as a useful feedback tool for students willing to access the online platform.

Online information system monitoring is the primary form of feedback *some* students use to evaluate classroom performance. A study conducted by Seldow (2010) examined the impact of online grade book on student goal orientation, self-efficacy, and grades. Study participants included 721 public high school students who completed a paper-based survey. The study identified the fact that "traditionally, grade books were clandestine records of student performance. Students and families were informed of student grades at the teachers' discretion or when report cards were mailed home. With data access shifting, teachers, and administrators are subject to a new level of scrutiny" (Seldow, 2010 p. 74). The findings of this study revealed that students who checked their online grades had a higher degree of self-efficacy, when compared to the control group, those students without such access. It should be noted that in this study, accessing grades

online via the student information system did not impact the student's goal orientation, or their grades (Seldow, 2010). On-line gradebooks serve to support the needs of students who possess feedback monitoring mindsets and those that struggle to engage in one-on-one performance discussions, as described below.

On-line gradebooks appeal to individuals who possess a feedback monitoring mindset. Hosts of variables preclude individuals from obtaining feedback directly from supervisors, teachers, administrators, etc. These variables may include fears of being perceived as naive, unintelligent, or desperate for feedback. Additionally, some people are shy, anxious, and worried about approaching teacher or other leaders for feedback regarding their academic or professional performance. The use of on-line grade books reduces anxiety for some as feedback can be obtained sans direct contact with the evaluator and eliminates personal inhibitions (Geddes, 2009. p. 496). Finally, gradebook features within the student information system provides students with a comparison tool by which they may measure their performance against the mean. Such information proves valuable for students who possess acute self-regulating learning profiles.

It is believed that integrating all facets of administrative applications including, but not limited to, transportation, special education management, food service, etc. in concert with attendance and grades constitutes the most effective qualities of SIS systems. Having such information accessible to students (along with parents) has associated benefits. Lacina, (2006) contends that that some of these benefits include, but are not limited to:

- Students have immediate access to their performance; in some cases, the SIS provides detailed feedback from the teacher, discussion forums, and comments that expand the students understanding of their achievement in a particular course.
- SIS's afford students (and parents) the opportunity to view their grades anywhere/anytime.
- Progress can be reported with greater immediacy then quarterly report cards.
- For teachers, grading programs allow teachers to quickly see class averages, create reports, and identify concerns. The immediate accessibility of such information affords teachers more time to plan lessons, as they no longer need to determine class/course averages 'by-hand.' (p 252)

The positive attributes commonly attributed to the accessibility of an online gradebooks, within a given student information system, include increased access to academic performance information (grades) in real-time, improved parental involvement and participation in the academic lives of their children, improved communication between schools and households, and positive academic outcomes for students (Bird, 2006; Juedes, 2003; Juedes, 2005; Lacina, 2006; Moore, 2015; Patrikakou, 2015; Reed, 2008; Schrand, 2008). Despite these benefits, alternative commentary related to the use of online grade books is evident in the literature.

Detriments.

While the benefits of online grade books have been established above, some the determents identified by Lacina, 2006 include:

- Electronic gradebooks may not be developmentally appropriate for primary and intermediate level schools. Reducing students to A's or B's at this level is not consistent with the culture that exists at this level of schooling.
- Grade reporting at the primary and intermediate level of school should document what students can do, not keep record of what they cannot do well.
- Use of electronic gradebooks to note percentile scores, grades, and means is not realistic or appropriate at the early childhood level of education. (p. 253)

These tools have been effective in increasing a degree of communication, but the 'type' of communication may lack meaning if used improperly. Greitz Miller et al.,

(2016) present findings from a comprehensive literature review and thematic analysis of commentary and quotes posted on online mass media sources. Their findings indicated that the communication presented via online gradebooks serves to transmit information, however, it does not address the greater needs for two-way communication between schools and households (Greitz Miller et al., 2016). While online gradebooks have become standard practice in nearly all schools throughout the United States, considerations must be made for the secondary consequences associated with consistent access to student information systems.

At the secondary level, SIS's have changed the nature of communication between the triad of invested parties- teachers, parents, and students. SIS's may, by their very existence, shift the burden of academic responsibility from students to their parents. Formerly (prior to the advancement and proliferation of SIS) secondary education students were expected to assume a greater role in their own academic lives. Providing parents with detailed information on their children through SIS has eroded the autonomy students previously experienced. The responsibility for monitoring academic achievement is shifting from students to their parents (Greitz Miller et al., 2016).

The prevalence of these platforms, along with the proliferation of this technology, threatens to over stress families and students alike. McKenna (2016) states that "Nearly all of America's public schools now post grades on-line through student-management software such as PowerSchool, Engrade, LearnBoost, and ThinkWave" (McKenna, 2016). The expansion of this technology has occurred steadily over the course of the past 15 years. While there are positive attributes to such readily available information, detrimental secondary consequences must also be considered. SIS systems could

potentially discourage students from experimenting, making mistakes, or taking risks because of constant assessment and reporting of performance. Additionally, "the heightened adult surveillance of kids is precisely what they don't need during this stage of development; it can create "robo-students" and exacerbate the already-distressing levels of stress, anxiety, and depression among teenagers" (McKenna, 2016).

Opponents to the use of online gradebooks commonly cite concerns related to the developmental appropriateness of such platforms. The "type" of communication presented via the platforms increase degrees of stress and anxiety on adolescent learners, and the quality of the feedback presented. It is evident that much of the data provided via an online gradebook is purely outcome based and fails to provide the critical important process feedback that schooling requires (Geddes, 2009; Greitz Miller et al., 2016; Lacina, 2006; McKenna, 2016). Despite these detractions, online gradebooks continue to proliferate in US schools. From a teacher perspective, online grade books prove useful from both a time management and a recording keeping perspective.

Benefits for Teachers.

Online gradebooks improve teacher efficiency by increasing the amount of time available to be dedicated to lesson planning, curriculum, and instruction as less time is dedicated to determining averages and calculating grades (Migliorino & Maiden, 2004). Although slightly dated, Brophy (1983), shared insights related to self-fulfilling prophecies and shared recommendations related to minimizing negative expectation's effects and maximizing positive expectations. These recommendations include monitoring student progress closely, focus on individual student performance and

progress, and the need to provide constant informative feedback (Brophy, 1983). It is evident that the ubiquitous nature of online grade books with their continually accessible features affords teachers the opportunity to meet some of the above expectations.

On-line gradebooks afford teachers the capacity to calculate averages, weight assignments, create report cards, and develop information sheets, class averages and other statistical measurements of class performance, with the click of a button. The speed with which the above can be accomplishments works to ensure that educators have more time to dedicate to planning and preparation of their lessons. Despite the benefits above, George & Sleeth (1996), as cited by Migliorino & Maiden 2004, identified that "[we] must come to the realization that educators may harbor some form of fear or anxiety about using technology in their classrooms" (Migliorino & Maiden, 2004. p. 194).

Gap in the Research

Research has shown that parent involvement in the academic lives of their children yields positive results. These results include, but are not limited to, increased self-regulatory behavior and higher social functioning skills. Parent involvement may also increase children's confidence in their own abilities as well as their interest in learning. Academic outcomes can be enhanced when parents are actively involved (Ames, 1993: Anderson & Minke, 2007; Henderson & Berla, 1994; Henderson & Mapp, 2002). Additionally, research indicates that there is growing scholarship related to the use of Learner Management Systems in U.S. schools, however much of this scholarship is related to the pedagogical application of Learner Management System (Laho, 2019; Goodall, 2016). Limited research presently exists related to the use of the Infinite

Campus Parent Portal and the extent to which the academic information presented therein

inspires intervention (e.g., contact with school officials, academic support at home, etc.).

This case study will explore the landscape, usage, and perceptions of teachers,

administrators, and parents related to the use of Infinite Campus Parent Portal as a

communication vehicle. This study will add to the limited body of research and provide

insights into an underexplored topic within the present educational paradigm.

CHAPTER 3

Introduction

The chapter provides information about the methods and procedures for data collection and analysis. This case study will help teachers, administrators, and parents further understand the landscape and usage of the Infinite Campus Parent Portal as communication vehicle. Data collection included interviews with stake holder groups, including teachers, parents/guardians, and administrators as the foundation of this study. Qualitative research, which is designed to understand, develop, and discover is "descriptive and exploratory, builds rich descriptions of complex circumstances that are unexplored [or under explored] in the literature" (Marshall & Rossman, 2016). This research sought to determine the extent to which information posted within the Infinite Campus Parent Portal inspired intervention (e.g., contact with school officials, academic support at home, etc.). The data collected, per the details provided in this chapter, provided the foundation for the information presented in the findings and conclusions sections detailed in chapter 5. The findings of this study reveal insights into the lived experiences of teachers, parents/guardians, and administrators as they relate to the Infinite Campus Parent Portal.

Data collection involved a qualitative case study approach. Creswell (2013) described case study research in the following manner: "Case studies are a design of inquiry found in many fields, especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process or one or more individuals" (Creswell, 2013 p. 14). Further, "Cases are bounded by time and activity, and researchers collect detailed information using a variety of data collection procedures

over a sustained period of time" (Creswell, 2013 p. 14). Case studies employ multiple methods of collecting data (Creswell, 2013; Stake 1995; Yin, 2009, 2011). For this study, the researcher relied on individual interviews with parents/guardians, individual interviews with administrators, and focus group interviews with teachers.

The researcher endeavored to understand the potential merits and detriments of the Infinite Campus Parent Portal as a communication vehicle. Respectively, interviews were conducted with parents/guardians and administrators and focus group interviews were conducted with teachers. The findings of the interviews and focus groups reflect the foundation of this study. As described by Yin (2011), the goal of such open-ended interviews is to "Encourage participants to have the time and opportunity to reconstruct their own experiences and reality in their own words" (Yin, 2011 p.32). As such, for the purposes of collecting the qualitative data involved in this study, the methodology included a series of open-ended interviews with teachers, administrators, and parents representing three distinct stake-holder groups outlined further in the Setting section of this chapter.

Methods and Procedures

Research Questions

The following research questions guided this study.

1. What are the user (teacher, administrator, and parent/guardian) perceptions of Infinite Campus at the high school level in a suburban district?

2. How do teachers, administrators, and parents use Infinite Campus at the high school level in a suburban district?

3. To what extent does the use of Infinite Campus, at the secondary/ high school

    level affect family engagement?

Setting

The research site was a public high school setting (grade nine through grade

twelve) with 2,187 students. The site is in a suburb roughly 50 miles from a major

metropolis. The researcher used a convenience sample including willing parent

participants, teachers, and administrators, further defined in the Participants section

below.

According to the New York Stated Department of Education (2018), the

demographics of the school studied include the following: 51% of the high school

population is male, 49 % female; 82% of students are white, 2% multiracial, 1% Black,

6% Hispanic or Latino. The County reports an 88% high school graduation rate compared

against the overall state average of 80% (NYSED, 2018).

Table 1: 2018-2019 Enrollment Data School A (NYSED Data Site, n.d.).

Ethnicity	Number of Students	Percentage
American Indian or Alaska Native	1	0%
Black or African American	28	1%
Hispanic or Latino	139	6%
Asian	191	9%
White	1,788	82%
Multiracial	40	2%
Total	2,187	100%
Other Groups	**Number of Students**	**Percentage**
English Language Learners	16	1%
Students with Disabilities	392	18%
Economically Disadvantaged	318	15%
Homeless	NA	NA

Participants

The study included parents, teachers, and administrators from a public high school setting (grade nine through grade twelve) with 2,187 students. The site was in a suburb roughly 50 miles from a major metropolis. A total of 21 individuals participated: eleven parents, eight teachers, and two administrators.

The literature reveals that parent participation in the academic lives of their children begins to diminish as students mature in school age (Brown, 1989; Dwyer & Hecht, 1992; Epstein, 2010; Epstein, 1995; Spera, 2005). A myriad of factors contribute to diminished levels of parent involvement in the academic lives of their maturing children. By selecting parents for this study, the researcher examined the lived experiences of parents/guardians, related to the Infinite Campus Parent Portal and its impact on their behavior. Stake (1995) recommends that the researcher select those that best help understand a given case" (p.56). Parents/guardians, teachers, and administrators are stakeholders who use the Infinite Campus Parent Portal in a variety of ways. Parents' use of data management systems (like Infinite Campus) to monitor academic performance has the potential to enhance educational outcomes (Bird, 2006; Juedes, 2003; Juedes, 2005; Lacina, 2006; Patrikakou, 2015; Reed, 2008; Schrand, 2008). As such, the researcher interviewed parents/guardians for this study. The usage patterns for teachers reflect an additional lived experience that is examined by this case study.

For teachers, online grade books improve teacher efficiency and afford educators with additional time to dedicate toward lesson planning, curriculum design, and instruction. Such platforms allow teachers to monitor student progress more efficiently and provide critical informative feedback (Migliorino & Maiden 2004). Despite the

above-mentioned benefits, it should be noted that some educators harbor fears and/or anxieties related to the use of technology in their respective classrooms (Migliorino & Maiden, 2004). Teachers selected for this study provided feedback relative to their use of Infinite Campus. Teachers reflect an integral component of the three stakeholder groups (parents/guardians, teachers, and administrators) and their participation in focus group interviews is an essential component of this study.

The sampling employed for this case study afforded insights into the perspectives of three distinctly different stakeholder groups: teachers, parents/guardians, and administrators. Each participant's usage patterns, experiences using Infinite Campus, and motivations for using the platform provided relevant insights into the lived experiences of selected participants. The researcher chose parent participants representative of different achievement levels. The researcher also sought parents representing each grade level, grade nine through grade twelve. The District's Data Management Specialist provided the student grade point averages to the researcher, who then identified a range of achievement levels (achievement bands), as evidenced by student grade point averages: low performing (grade point average between 0% and 74%), average performing (grade point average between 75% and 84%), and high performing (grade point average between 85% and 100%). After identifying students, at each grade level who fit the grade point average descriptions above, the researcher solicited parent/guardian participation via recruitment flier and email communications. Selected teacher participants represented a cross section of academic areas, and selected administrators represented those with intimate knowledge of the functions, features, and intended purposes of the Infinite Campus data management system. While the sampling measures utilized provided a

diverse cross section of stakeholders, it did not include student participation, nor did it canvas the entire spectrum of Infinite Campus users. Further details related to this sampling method are outlined in the Limitations section of Chapter 5.

Data Collections Procedures

Interviews

For the purposes of collecting the data involved in this study, the methodology included a series of semi-structured, open-ended interviews with parents, teachers, and administrators. Providing research participants with exposure to open-ended questions allowed the participant to contribute as much or as little detailed information as he or she desired. "Open-ended interviews are likely the most popular form of interviewing utilized in research studies because of the nature of the open-ended questions, [allows] the participants to fully express their viewpoints and experiences" (Turner, 2010). While the researcher considered other methods of collecting data, such as informal conversation or general interview, the researcher ultimately employed a semi-structure, open-ended interview design, which afforded the researcher the opportunity to ask follow-up questions driven by participant responses.

Creswell 2003 and 2007, as cited by Turner (2010) suggests that the researcher consider (a) the preparation of the interview, (b) the constructing of effective research questions, and (c) the actual implementation of the interviews: The creation of effective research questions for the interview process proved essential to the interview design. Effective questions, "Should allow the examiner to dig deep into the experiences and/or knowledge of the participants in order to gain maximum data from the interviews"

(Turner, 2010, p. 757). As described by McNamara (1999), effective interview questions should: be worded in an open-ended manner (allowing respondents to choose their own terms for answering questions); should be neutral and avoid wording that may encourage the respondent to answer in a particular manner; should be asked on at a time and worded clearly; should avoid the use of 'why?' (McNamara, 1999) (See Appendices E-G).

A total of 21 individuals participated in this study: eleven parents, eight teachers, and two administrators. The researcher designed questions to elicit participant opinions about the use of student information systems as a communication vehicle. The researcher gained greater insights into participant perceptions of these technologies which revealed new insights that may serve to impact future usage of such platforms for the district studied.

The implementation of the interview questions proved equally as important as the preparation and development of the questions themselves. McNamara (1999) recommends that the researcher periodically ensures that recording devices being used function properly; remains neutral throughout the interview process; monitors their body language throughout the interview (e.g., does not appear to be excited or disappointed by a response provided); provides transitions between questions; maintains focus on the questions; and does not deviate from the questions set to be discussed (McNamara, 1999). Following McNamara, the interviewer remained neutral in posture and tone throughout the interviews with parents/guardians and administrators.

Focus Groups

Barbour (2008) as cited by Berg (2017) states that "Focus group interview is a style designed for small groups of unrelated individuals, formed by an investigator and led in a group discussion on some particular topic or topics" (p. 94). The use of focus group interviews, with teachers that represented varied academic disciplines, afforded the researcher the opportunity to investigate the perceptions of various stakeholders through discussion about the conscious, semiconscious, and unconscious psychological and sociocultural characteristics and processes among various groups (Berg, 2017). Following recommendations from Kruger (1994), focus group size should be kept to no more than seven participants. Doing so allowed the researcher to effectively gauge participant responses and reflected a useful data-gathering strategy (Berg, 2017). The researcher outlines below recommendations related to conducting focus groups.

Berg, (2017) outlines several basic ingredients for effective focus groups. These ingredients include a clearly defined research problem; careful consideration of the composition of the group, e.g., homogeneous, or heterogeneous; establishment of an appropriate environment for participants; an aware/ listening facilitator; proper organization on the part of the researcher; structured process that is not constrained/ restrained by the researchers; systematic analysis (p. 95). The researcher established two different heterogeneous focus groups including math, science, social studies, and English teachers responsible for teaching grade nine and grade eleven. The researcher followed the recommendations outlined above as they relate to a well-defined research problem, group composition, environment, facilitators role, structure, and analysis.

Documents

The researcher's document analysis followed triangulation of information

recommendations from O'Leary (2014) "Document analysis is a form of indirect data

analysis" (p. 215). The analysis includes the "collection, review, interrogation and

analysis of various forms of written text as a primary source of research data" (p. 696).

For the purposes of this study, documents included images of the Infinite Campus Parent

Portal; images of the Infinite Campus Grade entry screens; images of messages to be

shared with parents/guardians related to missing/ late/ incomplete assignments; images of

marking period comments used by teachers to communicate with parents/guardians

quarterly; grade entry guidelines utilized by teachers. Document analysis protocols are

defined in Appendix H.

Trustworthiness of the Design

Stake (1995) indicates that "all researchers recognize the need for being accurate

in measuring things but logical in interpreting the meaning of those measurements" (p.

108). The researcher established protocols for the triangulation of the data obtained

during the focus group interviews. Triangulation refers to the use of multiple sources of

data to confirm claims during the data analysis portion of the study (Creswell, 2013; Yin,

2011; Stake 1995). The data sources used for this study included interviews with

administrators and parents/guardians, along with teacher focus groups. The researcher

afforded participants the opportunity to review transcripts of their interviews or focus

groups in an effort to support member checking. As defined by Stake (1995),

"[participants] are requested to examine rough drafts of writing where the actions or

words of the actor are featured… The [participant] is asked to review the material for

accuracy and palatability" (p. 115). This process allowed all participants the opportunity

to review what was said, to add further details as needed, and/or redact information that failed to capture the intended message of their communication.

Research Ethics

First, the researcher obtained approval from the University's Institutional Review Board (IRB). Once the researcher secured IRB approval, the researcher provided the Superintendent of Schools letters of informed consent and the research proposal. The researcher then secured the written approval of the Superintendent of Schools. After obtaining clearance from the IRB and the Superintendent of Schools, the researcher secured participation from teachers, parents/guardians, and administrators. Participants were provided a Statement of Informed Consent (See Appendices B-D) and were made aware that their participation in this study was voluntary. Through the Statement of Informed Consent, the researcher provided participants with details related to the voluntary nature of the study, as well as the structure of the planned interviews or focus groups and ensured that the researcher would maintain their confidentiality throughout the study.

Parents/guardians and school administrators participated in individual interviews, while teachers participated in focus group interviews. Through individual interviews and focus group interviews, participants provided commentary related to their opinions, perceptions, and usage patterns of the Infinite Campus Parent Portal. The researcher recorded participant responses verbatim and summarily provided interview transcripts to each participant to ensure that participant responses were not compromised in any manner. In addition, the researcher informed all study participants that their responses were recorded and that they had the opportunity to adjust their responses, end the

interview, or withdraw from the study at any time. Study participants shared their perceptions fully aware that their participation was voluntary and that they could review the transcripts of all recorded interviews/ focus group sessions (See Appendix B-D). Finally, the researcher assigned participants pseudonyms to further protect the confidentiality of all participants. The researcher took care in preparing, constructing, and implementing all interview questions as recommended by Creswell (2007) and Turner (2010).

Data Analysis

The researcher recorded interviews with administrators, teacher focus groups and parents/guardians and then uploaded to Rev.com. Rev is "An American Speech-to-text company that provides closed captioning, subtitles, and transcription services" (Rev, 2021). Once secured, the researcher uploaded transcripts to Dedoose, which is "A cross-platform application for analyzing qualitative and mixed methods research with text, photos, audio, videos and spreadsheet data and more" (Dedoose, 2018). Dedoose was used to house and code the interview data. As outlined by Saldaña (2013), a code is a word or phrase that represents "A summative, salient, essence-capturing, and or evocative attribute for a portion of language-based or visual data" (p. 3). The researcher analyzed and coded the data following recommendations on descriptive data, pattern coding and code weaving as presented by Saldaña (2013). An essential aspect of a qualitative case study is the link established between the data that is collected and the ensuing meaning making (Saldaña 2013). The researcher subjected the data to three rounds of coding: descriptive coding, pattern coding, and code weaving.

The researcher uploaded the data into Dedoose and coding cycles (descriptive coding, pattern coding, and code weaving) began. Descriptive coding is used to "summarize in a word or short phrase-most often as a noun- the basic topic of a passage of qualitative data" (Saldaña, 2013 p. 88). After the descriptive coding was completed, the researcher proceeded to pattern coding. Pattern coding allowed the researcher to identify emergent themes and to summarize the information into a smaller set of themes or constructs. Pattern coding also afforded the researcher the opportunity to identify the major themes, search for rules, causes and potential explanations in the data (Saldaña, 2013). Finally, code weaving ensured that the researcher was "remaining grounded in the data and not relying too heavily on speculation" (Saldaña, 2013 p. 171). It also allowed the researcher to explore the interaction and interplay that existed between the codes established during the pattern coding phase.

The researcher used descriptive coding, pattern coding, and then code weaving to identify emergent themes, including but not limited to parent/guardian appreciation for or dejection with the Infinite Campus Parent Portal; parent/guardian usage patterns based on perceived merits and/detriments of the Parent Portal; teacher support, and or disengagement with Infinite Campus, based on their opinions of its utility; and administrator appreciation for, and or dejection with Infinite Campus, based on their opinions of the platform as a useful communication method.

Researcher Role

The researcher served in the capacity of facilitator throughout the interview process. As a building administrator, the researcher has extensive experience

communicating with parents, knowledge of the Infinite Campus data management system, and recognizes the importance of school to home communication.

The researcher conducting this study has worked in the field of education since 2003. The researcher has experience as a classroom educator (12 years), and as a building administrator (6 years) including the positions of coordinator of student affairs, assistant principal, and middle school principal. After completing state mandated education/certification requirements for School Building Leadership and School District Leadership, the researcher began an administrative career in 2015. As a former classroom educator, the researcher noticed indications that students, parents, teachers, and administrators were increasingly reliant on the Infinite Campus Parent Portal as a primary communication vehicle to report on student performance, in particular a student's academic performance.

The researcher recognizes and acknowledges that his position as an administrator, could serve to influence the responses provided in focus-groups with teachers, or during the individual interviews with parents/guardians and building administrators. Experientially, the researcher knows that teachers are sensitive to the timeliness of posting grades into the data management system. Additionally, the researcher remains entirely aware of the frequency of access to the Infinite Campus Parent Portal, as evidenced by usage trends/data, and frequently responds to parent/guardian inquiries related to the grades posted therein.

With the above professional experiences in mind, the researcher recognizes that the lived experiences of the study participants could serve to bias their commentaries. These biases could also serve to impact the trustworthiness of the study (Creswell, 2013;

Marshall & Rossman, 2016). Efforts were taken to avoid confirmation bias, a condition that presents itself when the researcher attempts to support their own opinions related to the given topic of study. To avoid such confirmation bias, the researcher analyzed all data with a clear and unbiased mind, evaluated participant commentary, and ensured that pre-existing mental constructs did not influence the findings of this study (Creswell, 2013; Marshall & Rossman, 2016). The researcher made efforts to ensure that all participants were provided an opportunity to share their opinions without reservation. To do so, conditions of anonymity, as outlined in the Statement of Informed Consent (See Appendices B-D) were honored to encourage transparent conversations between the interviewer and participating stakeholders. Finally, the researcher created open-ended interview questions that afforded participants the opportunity to share their own lived experiences rather than questions that created conditions for simple agreement/ disagreement. Structuring questions in such an open-ended manner allowed the researcher to avoid acquiescence bias (Creswell, 2013; Marshall & Rossman, 2016). The researcher endeavored to avoid conditions that could lead to confirmation bias, acquiescence bias, and endeavored to provide participants an opportunity to share their experiences, unencumbered by the opinions and or influences of the researcher.

Conclusion

This chapter provided information about the methods and procedures utilized for data collection and analysis. The following chapter will present the findings from the data obtained and reports the themes that emerged from the commentary shared by contributing stakeholders related to each of the research questions.

CHAPTER 4

Introduction

The purpose of this case study was to further understand the landscape, usage, and perceptions of teachers, administrators, and parents/ guardians related to the Infinite Campus Parent Portal as a communication vehicle. This study utilized two focus groups, including teachers of English, mathematics, social studies, and science responsible for educating students in grade nine and grade eleven. Additionally, this study relied on individual interviews conducted with members of a high school building leadership team, and individual interviews conducted with eleven parents/guardians. Participating parents/guardians represented students at varied grades (nine through twelve) and varied achievement levels. The study was designed to inform educational leadership on parent/guardian, teacher, and administrator usage patterns, perceptions, and the utility of the Infinite Campus Parent Portal as a communication vehicle. This chapter presents the findings from the data obtained and reports the themes that emerged from the commentary shared by contributing stakeholders.

This case study provided insights into the parent/guardian, teacher, and administrator usage patterns of Infinite Campus. Additionally, this case study revealed the perceptions of parents/guardians, teachers, and administrators related to the Infinite Campus Parent Portal as a communication vehicle. The interview and focus group data revealed four overarching themes: Infinite Campus Usage Patterns, User Perceptions of Infinite Campus, Student Stress (as reported by parents/guardians, teachers, and administrators), and Mental Models.

The first major theme that emerged was related to Infinite Campus usage patterns. Within the first overarching theme, three sub-themes emerged that included the usage patterns of parents/guardians, the usage patterns of students (as reported by parents/guardians, teachers, and administrators), and the usage patterns of teachers.

The second overarching theme that emerged was the user perceptions of Infinite Campus. Within the second overarching theme, three sub-themes emerged that included the parent perceptions of Infinite Campus, administrator perceptions of Infinite Campus, and the perceptions of parents/guardians, administrators, and teachers related to one-way vs. two-way communication.

The third overarching theme that emerged was related to student stress (as reported by parents/guardians, teachers, and administrators). Within the third overarching theme, three sub-themes emerged that included parent/guardian perceptions of student stress related to student access to the Infinite Campus Parent Portal, the administrator perceptions of student stress related to student access to the Infinite Campus Parent Portal, and the teacher perceptions of student stress related to student access to the Infinite Campus Parent Portal.

The fourth overarching them that emerged was related to mental models. Within the fourth overarching theme, two sub-themes emerged that included shared responsibilities and student responsibilities. Table 3 below provides an illustration of the themes and the associated sub-themes that emerged from this study.

This chapter concludes with a discussion of the findings according to the research questions that guided this study.

Findings

Theme 1: Usage Patterns

All participants shared their views on the usage of Infinite Campus Parent Portal. Different usage patterns were uncovered relative to the 'role' that each participant played within the learning organization and sub-themes emerged related to overarching theme of Usage Patterns. The first sub-theme that emerged was parent/guardian usage patterns. The second sub-theme that emerged was the usage pattern of students (as reported by parents/guardians, teachers, and administrators). The third sub-theme that emerged was the usage patterns of teachers. Collectively, these three sub-themes, parent/guardian usage patterns, student usage patterns (as reported by their parents/guardians, teachers, and administrators), and teacher usage patterns, encompass the overarching theme of Usage Patterns. Each of the three sub-themes are further developed below.

Parent/Guardian Usage Patterns

Parent/guardian participants were asked to share their present use of the Infinite Campus Parent Portal and commented on the frequency with which they review the academic performance information provided therein. Parent/guardian participants, at all grade levels, indicated a familiarity with the Parent Portal and shared that they did indeed view the academic information presented within the Parent Portal. All parents/guardians shared that they used the Parent Portal to review their child's grades, determine if there were any missing assignments, assess student progress, review a teacher grading policy, review attendance patterns, access transcripts and quarterly report cards, etc.

Administrators, parents/guardians, and teachers shared a variety of responses related to parent usage patterns and their rational for degree of use of the Parent Portal.

Rational for Use.

The parents/guardians, administrators, and teachers interviewed shared that their interest in reviewing the Parent Portal is essentially to monitor student academic performance. Parent #1, the parent of a low performing grade nine student, shared that the Infinite Campus Parent Portal, "Has always been useful in [allowing us] to stay up to date with the children's grades and missing assignments." This sentiment is similarly presented by Parent # 2, the parent of an average performing grade nine student who shared, "I may check Infinite Campus here and there to see what his grades are just in case, kids are sneaky, and he doesn't want to tell me the truth. That's how I keep up with his classwork and his homework. Further, Parent #7, the parent of a low performing grade eleven student shared, "I use it [the Parent Portal] to see grades, I use it to see how many absences [my child] has, or how many lateness to class [my child] has…To review if we are making progress, if he's getting better, or if he's not…" These sentiments were consistently echoed by all participating parents/guardians, who indicated that they have an understanding of the information available and that they access the Parent Portal with varied frequency.

Following along a similar thread, Building Administrator #2, a building administrator with more than 20 years of experience, shared:

> The ability to be able to give parent's access to how a student is doing not only does it give you a number, but it also gives you the detail to the assignment. It gives you a due date to the assignment. It gives the teacher the opportunity to be able to write a comment. If something's late, they can write late.

Both stakeholder groups (administrators and parents/guardians) indicated an understanding of the 'type' of information presented within the Infinite Campus Parent Portal and similarly expressed that the academic information presented therein is informative. However, the stakeholders expressed a variety of differing opinions regarding their use patterns and access frequency to the Parent Portal. Subsequent paragraphs will outline parent/guardians rational for accessing or eschewing access to the Infinite Campus Parent Portal.

Some parents/guardians indicated that their usage was more frequent than others. A spectrum, from frequent use, to limited use, is evident in the parent/guardian responses. For example, Parent # 10, the parent of a low performing twelfth grade student, reflecting a more frequent usage pattern, shared that he/she accessed the Parent Portal, "Every few days." The Parent continued, "I just go on, I check the grade and just see any missing assignments." Similarly, Parent # 4, the parent of a low performing tenth grade student stated, "You are able to go on the portal and actually see in real time what is missing." The usage of the term "real time," and "every few days" by Parent #10 and Parent #4 respectively represents a more frequent parental usage pattern.

While Parent #4 and Parent #10 represent more frequent access patterns, other parents' usage patterns were more weekly or alternating weekly. For example, Parent #1, the parent of a low performing grade nine student shared, "Maybe, I check the portal once a week or once every two weeks." Similarly, Parent #3, the parent of high performing grade nine student shared, "I do check Infinite Campus myself periodically." Parent #11, the parent of an average performing grade twelve student, indicated that they

reviewed the Parent Portal "once every two weeks…" The parent adamantly continued, "It depends on what kind of pattern I see. If there's something that's consistent that I don't like seeing, then I'm going to check often." While Parent #1, Parent #3, Parent #4, Parent #10, and Parent #11 shared that their access is every week, every other week, or more frequent, some parents shared limited usage, indicating that their access to the Parent Portal occurred on a quarterly basis. The researcher notes that the parents who shared tendencies to frequently access the Parent Portal represent children/students of all performance and grade levels.

While some parents indicated daily or weekly use of the Infinite Campus Parent Portal, others indicated limited use to include quarterly access or no access at all. For example, Parent #8, the parent of an average performing eleventh grade student shared, "I definitely check it quarterly, and maybe once or twice during the marking period." Similarly, Parent #9, the parent of high performing eleventh grade student, indicated that, "I use it [Parent Portal] when the school notifies me saying that report cards are out, basically that is the only time I use it. Other than that, I do not use it on a daily basis." This varied usage pattern is supported by the building administrator who shared "Some parents (like students) are very obsessed with it [Parent Portal], some may be less."

As evidenced by the responses above, the parents who participated in this study, reflect a spectrum of usage patterns that include daily access, weekly access, or quarterly access. Additionally, the researcher notes that that all parents/guardians who participated in this study indicated a familiarity with the Infinite Campus Parent Portal and were knowledgeable of its information. While usage patterns varied, participating parents/guardians shared opinions related to their usage of the Parent Portal and/or their

rationale for limited Parent Portal use. The researcher provides participant rational for limited use of the Parent Portal in the following section.

Rational for Disregarding the Parent Portal.

Some of the participating parents/guardians shared that they utilized the Infinite Campus Parent Portal in a more limited capacity. Their rationale for limited use included but is not limited to the following themes: parents/guardians expect their high school student to grow increasingly more independent; parents/guardians shared that when they frequently access the Parent Portal, it erodes trust and/or creates tension within the household; parents/guardians expect their child to actively communicate school related matters with their parents/guardians. Specific evidence to support the themes mentioned above is provided below.

For example, Parent #7, the parent of a grade eleven low performing student interested in the value of trust and the growing independence of her son shared, "I haven't been checking it [the Parent Portal] that frequently, because I get very upset, number one, and number two, I'm trying to give him his freedom if he wants, or if he needs to fail, that's fine, because he has a ton of support around him." The parent continued:

> I don't want to sit there and argue with him. And that's a daily argument, so I don't want to do that anymore. I don't look at it [the Parent Portal] as much as I should… I don't really get on it as often because I get very upset, and I think he needs to know that there's consequences. If you don't do your homework and you fail, you need to have consequences.

While the above parent shared that their limited use of the Parent Portal is to avoid conflict at home, the response similarly indicates a gradual release of responsibility and the independence that is expected of the grade eleven student.

Parent #8 shared an alternative position that their student prefers the trust and independence that is cultivated when the parent/guardian does not review the Parent Portal. The parent stated:

> Our son likes for us to build that trust with him, to let him fly. And we try to build that trusting relationship, where we are not really peeking into that [the Parent Portal], and looking at grades, and this assignment or that assignment."

Additionally, the parent shared, "I don't need it. It's really not a useful tool for myself and my family because I'm so connected with my kids and knowing what they're doing, what's going on, and where they need support." Similarly, Parent #9, the parent of a high performing eleventh grade student shared "…my daughter [monitors the Portal] for her own self tracking purpose. And honestly, she's a good student, so I really don't need to be tracking it every single day to ensure whether she's handing in an assignment or how she did on something." Finally, Parent #12, the parent of a high performing twelfth grade student shared, "I am not consistent in looking at the Parent Portal. It is something that occurs to me every once in a while. I'll say, ohhh…, I have to check up on [my child] and see how they are doing." The researcher pointedly notes that parents, representing all achievement levels, low performing (Parent #7), average performing (Parent #8), and high performing (Parent #9 and Parent #12), indicated an infrequent usage pattern. Their commentary revealed that reduced access to the Parent Portal was driven by a desire to provide greater independence to their children, to cultivate conditions of trust with their children, or to avoid conflict with their children.

Student usage patterns, as described by teachers, parents/guardians, and administrators are developed in the following section. Teachers and administrators shared similar sentiments related to student responsibilities and the growing independence of

high school students. Consistent with the comments shared by Parent #8, Parent #9, and Parent #12, both participating administrators and teacher focus group participants indicated that students at the high school level grow increasingly more attentive to their academics and monitor their progress more frequently. These sentiments are further developed in the student usage section to follow.

Student Usage Pattern (as reported by parent/guardian, teacher, or administrators)

Nearly all parents/guardians shared that their children visit the Parent Portal to review their academic performance information. Parent/guardians, teachers, and administrators consistently shared that students, frequently monitor their academic performance via the Parent Portal, in some cases to the point of compulsively reviewing their progress. The frequency and perceived compulsivity of student access to the Parent Portal is outlined in the following two sections.

Frequency of Access.

In general, a spectrum of student access to the Parent Portal is identified by parents/guardians, teachers, and administrators. As developed in the previous sub-theme relative to parent/guardian usage patterns, student use of the Parent Portal fell within a spectrum. Student usage patterns included infrequent (if at all), quarterly use, weekly use, daily use, or compulsive use of the Parent Portal, and is outlined below.

Nearly all participating parents/guardians shared that their children access the Parent Portal to review their grades, at some point in time. However, the frequency of student usage varied, and is only peripherally connected to the child's academic performance level. Responses indicated that low and average performing children tend to review the Parent Portal with less frequency, but this is not universally applicable. For

example, when Parent #7, was asked if her child, a low performing grade eleven student accessed the Parent Portal, the parent shared, "No, I don't believe so, because I think he would be very stressed out if he did… And I think looking at those grades and those comments would really upset him." Similarly, Parent #2, the parent of an average performing grade nine student shared that her child similarly did not access the Parent Portal. The parent shared, "If he knows he's doing good, he probably will not check it [the Parent Portal]." Similarly, Parent #1, the parent of a low performing grade nine student shared:

> The [child] probably logs on after takings some of the tests that are coming up or at the end of the quarter, just to see where [he] stands. [He] is probably logging in maybe three to four times a month, which is probably once a week or once every two weeks.

While there appears to be a pattern identified by Parent #1 and Parent #7, both parents of lower performing students, this pattern is challenged by Parent #4 whose child is a low performing grade ten student. Parent #4, shared that her son "Is checking the portal every other day." While a consistent theme could not be identified amongst the lower performing students, this is not the case when reviewing the information provided by the parents/guardians of high performing students.

All parents/guardians of high performing student consistently indicated that their children frequently review the Parent Portal. Parent #6, the parent of a high performing grade ten student shared, "My child has always gone onto the Portal under my name. He is constantly checking the Portal, checking his grades, and he is always filling me in." Similarly, Parent #9, the parent of a high performing grade eleven student shared, "I probably think that [she] checks [the Parent Portal] on a daily basis because [she] is highly competitive and [she has] certain goals and targets." Parent #12, the parent of a

high performing grade twelve student shared "I think [my child] checks [the Parent Portal] daily."

While the usage patterns of students, as reported by their parents/guardians, does not reveal any specific theme, a degree of parental consensus exists, namely that their children access the Parent Portal throughout the school year. A theme did emerge related to increased/more frequent access to the Parent Portal amongst higher performing students per their parents/guardians. Teacher and administrator perceptions of student usage patterns indicate a shared opinion that high performing students tend to access the Parent Portal with greater frequency. Teachers and administrators substantiated the parent/guardian opinions relative to more frequent Parent Portal access patterns and are further developed below.

The researcher asked parents/guardians, teachers, and administrators to share their perceptions of student usage patterns related to the Infinite Campus Parent Portal. While high school students in this district have their own Parent Portal accounts, all parents/guardians indicated that their children access the Parent Portal using their parents' log-in credentials. Teachers and administrators shared that children are knowledgeable of the Parent Portal and choose to access the information presented therein along a spectrum. Essentially, teachers and administrators shared that some children check the Portal with greater frequency than others. Student use of the Parent Portal, as related by teachers and administrators, generally included common opinions related to the rationale for student use. With consistency, the teachers and administrators shared that students access the Portal to review their grades. For example, an eleventh grade science teacher, as a participant in the grade elven focus group shared:

I find that students, I think, check the Infinite Campus grade book pretty frequently. I get responses sometimes from students very quickly after I put in a quiz or test grade. So, I think that they check it pretty frequently and respond to that. I don't get as much response initiated by parents about things that I put in the grade book, but a lot of response from students.

The grade eleven English teacher continued:

We found over the years that students check Infinite Campus sometimes multiple times during the day, sometimes even if there isn't an assignment due, they'll check it like somehow, they think their average is going to change. So, I think that's a good way for communicating with students.

The grade nine science teacher shared, "The students love to be able to see their grades. Again, there is instant gratification." The grade eleven science teacher shared a similar sentiment echoed by low performing parents related to Portal use. He stated, "I think that the student who doesn't do well, doesn't like to check it [the Portal], because if they don't check it, it doesn't exist." As previously stated, teacher focus group participants did not indicate that all low performing students refrain from accessing the Portal, rather they speculated that some low performing students did not review the information presented therein. While parent participants substantiated this claim, to a degree, this is not universally applicable, as some parents of low performing student indicated that their children check the Portal frequently. While teacher perception of student usage patterns indicated that students use the Portal with greater or less degrees of frequency, all participating teachers and administrators shared a contention that some students utilize the Parent Portal to a point of compulsivity. Their opinions related to such compulsivity and the deleterious impact it could have on child self-efficacy are further detailed below.

Perceived Compulsivity.

Compulsivity is a common theme that emerged in interviews with some parents but was prevalent in all conversations with teachers and administrators. Some parents and

all teachers and administrators commented on a theme that, for some students, there is a compulsion to frequently monitor their progress via the Parent Portal. Respondents indicated that such behavior is potentially developmentally inappropriate, destructive to performance feedback opportunities (those that can be provided when teachers conference and communicate more actively in a two-way manner) and may serve to create stressful conditions for the child (further outlined as a larger theme in a subsequent section related to student stress).

For example, the building administrator interviewed shared:

I think at our level, some students are obsessed with looking at their grades and finding them when things are posted or not posted. And they know which of their teachers is really fast in posting grades, they know the ones that maybe take a little longer.

The administrator continued, "Some kids being just obsessed with how they're doing and constantly on Infinite Campus, looking at it and seeing what their grades are." This administrator shared a concern related to the developmental inappropriateness of such conduct sharing that, "I know that there are some kids that are so obsessed with it that it's like, we have to almost tell them not to check so often and so quickly. [They will] just keep checking and checking and checking. It's concerning." Similar to the sentiments of the building administrator, Parent #6, the parent of a high performing grade ten student shared, "I can tell you by the time he takes [his] tests until probably tomorrow night, he'll probably check the portal 30 times to see how he did on the test." Further, "He's constantly checking it, checking his grades... I mean, he's checking it [the Parent Portal] all the time." From the teacher perspective, the grade eleven English teacher shared:

I will sometimes hand back work, like an exam or paper, and then put the grade in. Because if I put the grade in first period and I hand back papers first period,

first period's telling third period, [the teacher] put the grades in." And they're all on their phones and they're checking it before I even hand back the work and look at any comments.

As evidenced in the administrator, teacher, and parent/guardian responses above, some students may access the Parent Portal with too much frequency. The administrators, teachers, and some parents/guardians indicated that the unrestricted access to Parent Portal could lend itself to compulsive patterns of behavior. Additionally, the teachers shared that when grades are posted, students immediately access the Portal. The children do so before the "work is handed back." Such conditions may prove damaging to student self-efficacy and could serve to disrupt the teacher's capacity to provide essential process feedback to students as the child is more focused on the numerical outcome indicators posted to the Parent Portal.

Related to the larger theme of Usage Patterns, teacher usage patterns were similarly explored via focus group interviews with grade nine and grade eleven teachers. A summary of their usage patterns and opinions is provided in the following section.

Teacher Usage Patterns

Interviews with building administrators and teacher focus group interviews included discussions regarding teacher grade entry expectations, teacher usage of the Infinite Campus Parent Portal, and the use of Infinite Campus as the primary vehicle to provide academic performance information to students (and their parents/guardians). The researcher further addresses these below.

Grade Entry Expectations.

With consistency, all teacher participants and both administrators shared their understanding of grade entry expectations. Interview data revealed an understanding that the timely entry of grades is expected by administrators and understood by teachers. However, it should be noted that the grade entry expectations for all teachers (including subject areas that were not included in these focus groups), within the setting studied, reflect an intentional degree of ambiguity. For example, according to Building Administrator #1, "The expectation is that it [grade entry] is done in a timely fashion…Teachers are to make sure that the information is placed within the system in a reasonable amount of time." Similarly, the grade eleven science teacher shared, "The grades should be submitted in a reasonable period of time with the understanding that different types of assignments have different reasonable amounts of time. Building Administrator #2 shared:

> Our expectation was that a reasonable amount of time, very open-ended word, reasonable, that amount of time was for there to be a grade entry. A math grade might be put in two to three days where a social studies or English grade might take two weeks to be entered.

When asked for greater specificity related to the frequency with which teachers enter their grades, the administrator continued:

> I would say that we have a vast majority of teachers who are putting in assignments on a weekly basis, if not more. Then, we have probably about 25% that are putting them in about once a week or once every other week. Then, every so often, you have that 3 to 5% that six weeks into the market period, they don't have a grade in there yet.

Teachers and administrators shared a common understanding that grades were to be entered in a reasonable amount of time for the purposes of presenting academic information to students. All teachers shared that grade entry expectations are reviewed

annually, discussed at department meetings, and that guidance is provided quarterly (as it relates to the finalization of marking period averages for their students). Both stakeholder groups indicated that the timely entry of grades is influenced by the scope of the assignment and the anticipated time required to grade and report that academic outcomes via Parent Portal. Additionally, the teachers and administrators both shared similar sentiments related to the utility of the Infinite Campus Parent Portal as a communication vehicle. Both teachers and administrators alike referenced the fact that the information presented in Portal could not be relied upon as the sole academic performance communication vehicle.

Parent Portal as a Primary Communication Vehicle.

The researcher asked teachers and administrators who were part of individual and/or focus group interviews to share their perceptions of the most commonly utilized communication vehicles related to student academic progress. Building Administrator #1 shared, "All grades, all grade reporting, all progress of any academic, anything related to academics is reported on Infinite Campus." Building Administrator #2 supported these statements, saying that, "The number one communication would be the gradebook. While dealing with the gradebook, if a student is doing or reaching their potential that would really remain to be the most important communication that's out there."

Teacher participants were similarly asked to share their perceptions of the most commonly utilized communication tools related to the conveyance of academic information to parents/guardians and students. The grade eleven social studies teacher shared, "If it's too broadly communicate [grades] the destination would be Infinite Campus because that's where everything ultimately runs through." Further, the grade

eleven English teacher shared that he "[Relies] on grade book in Infinite Campus as a way of parents being aware of what the grades are." The assertion that, the central repository for academic information is the Infinite Campus Parent Portal, is shared by grade nine focus group participants as well. The grade nine science teacher shared, "When it comes to communicating grades, it is definitely solely Infinite Campus." Based on the interview and focus group data, it is evident that teachers and administrators rely on the Infinite Campus Parent Portal as a central location to post and report academic information to parents/guardians and students. However, it should be noted that, despite the known usage of Infinite Campus to provide academic information to parents/guardians and students, both stakeholder groups (teachers and administrators) shared an understanding that the information presented in Infinite Campus could not, in sole measure, stand alone as a communication vehicle for parents/guardians or students.

Both stakeholder groups (teachers and administrators) indicated an understanding that posting grades to the Infinite Campus Portal reflects a component of a larger communication expectation. For example, Building Administrator #1 shared:

> The other expectation is that when the teacher is putting in grades that were indicating that the child was struggling, my expectation is that Infinite Campus was not the only source of communication. My expectation is that that has to be, and should always be, followed up with a phone call, a direct phone call. So, it could start with an email, but there has to be some phone communication with the parent if their child is really struggling and may be failing.

Building Administrator #2 reaffirmed the fact that communication efforts must go beyond Parent Portal information:

> [After posting in Parent Portal] we start bringing in other forms of communication such as a parent phone call, email, which I think you'll find the email to be more quickly used by a teacher than the parent phone call, then, we have times in which teacher will communicate with [the student] face to face. But for the most part,

the grade book is the richest way for them to be able to share academic progress throughout the course of a marketing period.

The grade eleven social studies teacher, as a participant in the focus group, shared a similar understanding/ opinion related to the importance of furthering communication beyond that which is posted to the Infinite Campus Parent Portal:

> If a student is failing or if they haven't handed in things towards the end of the marking period, I still will email or call home and say what's missing. Because if in the event I was ever called and said, "Well, you didn't tell me." I don't know if me saying, "It was updated on Infinite Campus." would actually hold an argument.

The extension of communication beyond the requisite posting of student performance (grades) into Infinite Campus Parent Portal will be discussed in a subsequent section: User Perceptions as a sub-theme, one-way vs. two-way communication.

Theme 2: User Perceptions

The second overarching theme that emerged during the analysis of the data collected was the User Perceptions of contributing stakeholders. Participants shared their opinions of the Infinite Campus Parent Portal and their different perceptions relative to the 'role' that each participant played within the learning organization. Sub-themes related to the overarching theme of User Perceptions of Infinite Campus, emerged. The first sub-theme that emerged was parent/guardian perceptions of the Infinite Campus Parent Portal. The second sub-theme that emerged was the administrator perceptions of the Infinite Campus Parent Portal. The third sub-theme that emerged was related to stakeholder (parent/guardian, teacher, and administrator) views related to one-way vs. two-way communication vehicles and the utility of the Infinite Campus Parent Portal as a communication vehicle. The final theme that emerged was the parent/guardian, teacher,

and administrator perceptions related to the "snapshot" of data provided via the Infinite Campus Parent Portal. Each of the four sub-themes, parent/guardian perceptions, administrator perceptions, one-way vs. two-way communication, and "snapshot" data are further developed below.

Participating parents/guardians shared diverse opinions related to their perceptions of the Infinite Campus Parent Portal. While some parents indicated that the Parent Portal failed to meet their needs, others shared an appreciation for the clarity and depth of the information presented, the accountability it placed on their children, the role the Portal plays in the conveyance of academic information, and the comprehensive nature of the platform. Two parents indicated that the Portal information failed to provide adequate information about their children. Their assertion plainly indicates a preference for communication that is beyond numbers, grades, and quantitative data presented on a screen. The perceptions of parents/guardians related to the Infinite Campus Parent Portal fold into a larger discussion related to the value of communication and varied perspectives on one-way and two-way communication between schools, teachers, and parents/guardians. Positive and negative parent/guardians' Infinite Campus Parent Portal opinions and further discussion on one-way and two-way stakeholder communication and perceptions are discussed in the next section.

Parent/Guardian Perceptions

All parents/guardians participating in this study demonstrated a familiarity and understanding of the information available to them via the Infinite Campus Parent Portal. Several parents specifically shared that one of the greatest benefits of the Parent Portal is that the information is presented is clearly understood. For example, Parent #1, the parent

of a low performing grade nine student indicated that, "The Portal gives just enough information where it's not bogging us down, it not overwhelming. It's just a nice, clear snapshot of what's happening." Further the parent indicated that, "[the Parent Portal] is an effective management system that allows us to get a clear idea of where our child stands academically." Similarly, Parent #3, the parent of a high performing grade nine student shared, "It's easy to see if one of my daughters received a 95 on an Italian assessment and then a 99, and then Infinite Campus updates the overall average, if it's easy to see how the grades contribute to progress. Parent #2, the parent of an average performing grade nine student shared an excited and more emphatic response when they indicated that, "Everything you need from, down to each assignment… what's due, what's coming next, it's perfect." Continuing with theme of clarity of information and the comprehensive nature of the Infinite Campus Parent Portal, Parent #12, the parent of a high performing grade twelve student shared:

> I think the portal is very comprehensive…I can see a very comprehensive view of every subject, the class work, the participation, the missing assignments. It definitely keeps me in the loop…I feel like it's very black and white. It's very clear.

Beyond the clarity of the information presented, as reported by the parents/guardians, additional benefits including, but not limited to, increased efficiency and speed of communication, student accountability, the facilitation of conversations with children at home, and insights into a child's study habits/patterns were identified as associated benefits related to the Infinite Campus Parent Portal. In speaking on the speed with which the Parent Portal conveys academic information to parents/guardians, Parent #4, the parent of a low performing grade ten student shared, "The grades are updated

frequently, and it allows electronic communication between the home and the school….

You can get things done quickly and do it electronically." The parent continued:

> It gives me the grade book updates. It also gives me the real time assignments when things are due, so I find that it's probably my best form of communication with the school and the teachers.

Parent #3, the parent of a high performing grade nine student shared, "Using Parent

Portal is a great way to learn exactly what it is they're doing, learn their patterns of study,

learn their patterns of assessment, learn what they are required to do weekly or monthly."

Participating parents/guardians indicated that the information presented affords

them the opportunity to see, in real time, their children's academics. As shared by Parent

#4:

> The Parent Portal plays a big part. It does give you the real time information on what's going on and it allows open dialogue between the student, the parent, and the teacher, and it's providing us all the information that's happening in the classroom when you're not there.

Further, in the absence of the Parent Portal:

> I would not know what was going on as quickly as I do today, and I think that It could potentially help a student who is struggling. Some students may not have the ability to come forward to share that they are struggling, the portal gives insight."

Parent #4 concluded that "You can use that tool, the Parent Portal, to explain to your kids

it's very important for you to do well, stay on top of your subjects, do well in school." As

the parent of a high performing grade ten student, Parent #6 echoed the associated

benefits of real-time communication:

> I think it definitely plays a role. I mean, it's nice when you say, oh, I wonder how they're doing. You can go in through the whole year if you want. I mean, I could go on there every day if I wanted to just to see, hey, on a daily basis.

While Parent #1, Parent #2, Parent #3, Parent #4, Parent #6, Parent #12, amongst others not shared above lauded the attributes of the Infinite Campus Parent Portal, it must be noted that Parent # 7 and Parent #8 shared opinions related to some of the shortcomings associated with the Infinite Campus Parent Portal.

Specifically, these parents, Parent #7 and Parent #8 conveyed the concern that the information presented in the Parent Portal is too general, appears to be from a template (particularly related to grade book comments), and does provide a comprehensive insight into a given child's strengths/ weaknesses. For example, Parent #7, the parent of a low performing grade eleven student shared the following criticism that the Parent Portal comments are redundant and pejorative. The parent comments,

> It's a very short, little sentence, and they all look pretty much similar to me. And they're all pretty repetitive about, "He needs work. He needs work. He's working towards the goal. He needs work. He needs this. He's not handing in homework." It's all the same to me, and all negative.

Further, Parent #7 continued, "The only thing it does for me is it tells me his grades, to be honest. To me, it doesn't give me a good picture of who he is in those classes." Despite the parent's consternation with the quality of the information presented to them, the parent indicated that they appreciated the fact that the Parent Portal is available, and they continued to review the Parent Portal information, stating:

> I'm happy that they do have a way that I can look at his grades. I'm not saying that I'm burying my head in the sand. I want to see them [the grades], but like I said, it's just a one-sided, pretty much point-click thing, where they put it in and it's very impersonal. And to me, there was not a lot of positives in that.

In a broader sense, Parent #8, the parent of an average performing grade eleven student indicated that their usage of the Parent Portal failed to provide a holistic understanding of their child's social and emotional wellness. The parent indicated that they review

academic information, however, little is presented anecdotally spoke to social and

emotional wellness:

> I think, I rely on the Portal to look at the number grades quickly to see how their child is doing. But I think it's almost like a false sense of security for parents to look at a quick number grade on the Portal and see that a child might be doing okay, because it doesn't reflect how a child is doing from a social, emotional perspective from a mental health perspective.

Interestingly enough, and as previously stated, all participating parents indicated a

familiarity with, and a usage of, the Parent Portal. While many study participants

espoused the positive aspects of information provided via the Parent Portal, two parents

were less than satisfied for the reasons noted above. However, even those parents, Parent

#7, and Parent #8 respectively, continued to review the information presented within the

Parent Portal.

Administrator Perceptions

Both participating administrators agreed that the Parent Portal is a useful tool to

transmit academic information to students and their parents/guardians. The

administrators were consistent in their belief that the information provided via the Parent

Portal reflects an easily accessible "snapshot" of a student's portfolio (this is further

developed in a subsequent section dedicated to "snapshot" data within this User

Perceptions section). The administrators viewed the Parent Portal as a powerful tool to

monitor progress and transmit information to parents/guardians and other invested

stakeholder groups.

Building Administrator #2 shared the following when asked to define the Parent

Portal:

The Parent Portal is a location within Infinite Campus where a parent can access their child's information that is sent from the school. One of the areas that they can look is gradebook. Another area they can look is backpack that would be where they get their report cards. The Parent Portal setup is specific to a parent and their child.

When asked about the utility of the Parent Portal and the role it serves in the conveyance of information to parents/guardians and students, Building Administrator # 2 shared:

The ability to be able to give parents access to how a student is doing not only does it give you a number. It gives you the detail to the assignment. It gives you a due date to the assignment. Its critical information. It gives the teacher the opportunity to be able to write a comment as well.

More broadly, Building Administrator #1 shared that the Infinite Campus Parent Portal paints a picture of the student that informs all stakeholders, not only the parents/guardians and the students. The administrator stated:

It paints a picture of them, that's not just for their parents, it's also for other adults in their lives, like a coach or a club advisor or any other, a teacher, administrator, anyone who will see that picture and I think that they know that may motivate them to do what they need to do to perhaps get their work done and take their learning very seriously because it's not just the parent that's seeing it. It's others that are seeing it as well. Students are forced to think about 'what type of a picture are these numbers and is this information actually describing about them. And that's powerful.

Building Administrator #1 shared the following related to progress monitoring and the celebration of a student's success/achievement using/selecting the positive comments available in the Parent Portal. The administrator stated:

I think another thing too is that just to be able to celebrate the successes too, it's like when you see a child go through, maybe in the very beginning in the first marking period where they were struggling, second marking period, still struggling and then you see the change in the progression over time where, wow, they really did make some growth in their learning and that's a beautiful thing for parents to see.

Finally, the building administrators perceived that an added benefit to the Parent Portal is the fact that it affords members of the administrative team (and other stakeholders, e.g., counselors, social workers, school psychologist, etc.) to identify patterns and themes related to students. While academic information is most certainly not the sole marker of the challenging times a given adolescent may be facing, it can serve as an indicator. Administrator #1 shared:

> I think that it provides so much opportunity for the teachers and for us as administrators to be able to tell them what to look for, where to go and what to do in the future. Like you said, the involvement, it provides an appropriate way for them to be involved and see.

Administrators consistently shared that the Infinite Campus Parent Portal is a useful tool to transmit academic information to parents/guardians and students. Additionally, they stated, with clarity, that: grades are not the only component of a child's education; that communication must go beyond the numbers presented in the Parent Portal; and students should use the Parent Portal appropriately to avoid the stressful conditions that may manifest themselves if used compulsively. Further information related to the administrator's perceptions of one-way vs. two-way communication will be outlined in the final sub-theme within this overarching theme of User Perceptions. Additionally, further detail will be provided related to the administrator's perceptions of student stress in the section of this chapter dedicated to the larger overarching theme of Student Stress.

Perceptions on One-way vs. Two-way

All participating stakeholders, parents/guardians, teachers, and administrators shared their perceptions related to the value/importance of communication and provided commentary related to the role that the Infinite Campus Parent Portal plays as a

communication vehicle. Teachers, administrators, parents/guardians all shared a common philosophy that the Parent Portal, in sole measure, cannot stand alone as a communication vehicle. While Parents/guardians, teachers, and administrators shared positive commentary related to the relative usefulness of the Parent Portal (discussed in the previous section related to user perceptions), the subsequent sections will be dedicated to reviewing the common themes that emerged related to the utility of the Infinite Campus Parent Portal as a communication vehicle. Additionally, the following section will discuss stakeholder (parent/guardian, teacher, and administrator) views related to one-way vs. two-way communication vehicles.

Parent Perceptions One-way vs. Two-way Communication.

Nearly all parents/guardians who participated in this study shared that the information available via the Infinite Campus Parent Portal provides useful insights into their children's academic progress. However, the research highlighted an emergent theme relative to the quality of the communication and the subsequent need to follow up with school personnel. Essentially, parents frequently shared that the information presented in the Parent Portal served as a useful one-way communication tool, but that additional layers of communications, particularly with teachers, are necessary. Parent/guardian participants consistently indicated that, after reviewing the academic information presented in the Parent Portal, they likely had to utilize additional two-way communication vehicles (phone calls or emails) to gain a more comprehensive understanding of their child's progress and/or needs.

Parents frequently shared the fact that they needed supplementary two-way communication to flesh out the information they had gleaned from the Parent Portal.

110

Some parents, however, indicated that a simple visit to the Parent Portal provided them with sufficient information about their child. It should be noted that these parents/guardians were in the minority. Parent #3, the parent of a high performing grade nine student shared, "I do check Infinite Campus myself periodically. So, I don't know if anyone really would need to contact me outside of that vehicle to discuss my daughter's progress." Similarly, as a commentary on the utility of the Parent Portal, Parent #4, the parent of a low performing grade ten student shared, "It [the Parent Portal] does also give me the grade book updates. It also gives me the real time assignments when things are due, so I find that it's probably my best form of communication with the school and the teachers." The parent continued, "The electronic communications through the Portal has been a great resource for families." Along a similar theme, Parent #6, the parent of a high performing grade ten student shared:

> I think the immediate feedback. Seeing how they're doing, especially as they're starting ninth, 10th grade, I think as a parent, if you can kind of look ahead and know you can't wait until 11th grade or senior year to keep your grades up, you can use that tool, the Parent Portal, to explain to your kids it's very important for you to do well, stay on top of your subjects, do well in school. And I think the utilization of the Parent Portal with the immediate feedback of the grades is my primary communication.

While this parent expressed their satisfaction with the one-way Parent Portal experience, the majority of parents indicated a need for further communication with their children, teachers, administrators, and/or counselors.

For example, Parent #9, the parent of a high performing grade eleven student when asked about the importance of communication, shared:

> Starts with Infinite Campus. And then when you start to see patterns of missing homework's, or low grades. And now they look like they're failing, then it would

be another layer of communication. So the initial [communication] is Infinite Campus.

Resoundingly, parents/guardians shared that, they felt the need to engage in two-way communications with the school after they viewed the information in the Parent Portal. These communications often included phone calls and emails with teachers. For example, Parent #3, the parent of a high performing grade nine student shared, "After reviewing the Portal I might contact the teacher to compliment them or to ask a question to learn more about the actual assignment." Parent #7, the parent of a low performing grade eleven student plainly shared frustration with the Parent Portal. They stated:

> The only thing it does for me is it tells me his grades, to be honest. To me, it doesn't give me a good picture of who he is in those classes. It just gives me his grades. To me, I'd rather listen to a teacher tell me who he is, what he's doing, how he acts in class, rather than just the grades, and working towards improvement, or not handing in homework.

Parent #7 redoubled the need for supplemental two-way communication:

> Until I speak to a teacher, that's when I can get a little bit of, "This is who your son is at school." I don't get a real gist of what he... I get that he's not doing well, but what is he doing well with? What can he do in school that's positive?

The commentary shared by Parent #7 is reiterated by Parent #9 who stated, "It's just a one-way communication that allows the teacher to tell you here's what it is and it's almost entirely one-sided." The parent continued, "I can see the grades for the child, I could see how they are performing, but it doesn't give me other answers to other questions that I might also be interested in. So, it's not a two-way communication." Thematically, participating parents/guardians indicated a need for communication that goes beyond Infinite Campus Parent Portal empirical data. Parent #8, Parent #9, Parent #10, and Parent #12 express their needs for supplemental communication below.

Parent #8, the parent of an average performing grade eleven student shared that

after they view the Parent Portal, they engage their child in a conversation related to

academic progress. This conversation often included a discussion about additional

communications with the teacher. The parent stated, "I speak to my child and I ask, do

you want me to make the call, or email, or get in contact with your teacher? Or would

you like me to help out if necessary?" Similarly, Parent #9, the parent of a high

performing grade eleven student shared that after reviewing the Parent Portal:

> I had a lot more frequent email communications or sometimes phone calls with
> the teachers. Obviously, if I saw something that I didn't like, or I had to question,
> or I needed an in depth understanding of what was happening, I just emailed the
> teacher or I called them.

Parent #10, the parent of a low performing grade twelve student, shared, "If I have a

problem [evidenced by an unexpected grade posted to the Parent Portal] I would email

the teacher and I would also speak to my child."

The common thread interwoven among all these parent comments is that the

Infinite Campus Parent Portal did not provide enough anecdotal information and that the

parents needed two-way communication follow-up. This is succinctly summarized by

Parent #9, the parent of a high performing grade eleven student. The parent stated:

> I don't know if the Parent Portal can give you all the nuances of issues like they
> give teachers, for example, can only put a one liner your child is great, or your
> child isn't attentive, but if you want to understand a bit more than that, I don't
> think so because I think it's beyond grades, right? I think there are personalities
> involved. There are other aspects to a child. So, [Portal presents] just a grade.

Essentially, Parent #9, like other parents, indicated that the Parent Portal presents

academic (grade) information and fails to provide the depth of information parents

require. Parent #9 continued, "The Parent Portal just gives you the grade and says, she's

great, but there are other nuances to a child as far as their personalities and their development that I'm also interested in." Parent #12, the parent of a high performing grade twelve student indicated a clear expectation for two-way communication and shared:

> I would like to know if there was an issue, something that was out of the ordinary, for example, if he did fail a test or if he was missing numerous assignments. I would personally like contact from the teacher through email or the guidance counselor if that were the case.

Parent #8, the parent of an average performing grade eleven student shared with Parent #12 the need for direct communication back from the teacher:

> Honestly, [my need for the Portal] it's minimal because our teachers, in [inserts school district name], do such a great job communicating with me outside of the Portal. I honestly, if the Portal just disappeared tomorrow, I wouldn't even miss it. Because I feel that connection, that email connection or a phone call, provides so much more connection and insight.

While other parents did not necessarily share such a resoundingly positive commentary on the effectiveness of school to home communication, evident Parent #8's response is the contention that their communication needs are being satisfied by two-way communication vehicles (email and phone calls) that exist outside the bounds of the Infinite Campus Parent Portal. The perceptions consistently shared by most parents/guardians indicated that the Portal serves as a useful one-way communication vehicle, however, the information presented therein often inspires greater communications that most often include emails and phone calls. The perceptions of teachers related to utility of the Infinite Campus Parent Portal is further discussed in the following section.

Teacher Perceptions One-way vs. Two-way Communication.

Participating teachers shared a similar theme to parents/guardians related to the utility of the Infinite Campus Parent Portal as a communication vehicle. All teachers consistently shared that the academic information presented in the Portal does not, alone serve as effective communication. Teachers agreed that additional layers of two-way communication must supplement Portal data. Related to the posting of grades in Parent Portal, the grade nine English teacher shared, "When you start to see patterns of missing homework's, or low grades. And now they look like they're failing, then it would [inspire] another layer of communication." Most often, the additional two-way communications that occurred, as shared by participating teachers, included, but were not limited to, emails with parents/guardians and students, phone calls with parents/guardians, or conversations with students. It is evident, based on the commentary shared by all teachers, that the Parent Portal provides a useful one-way communication, provides information about academic progress, and serves as a catalyst for further two-way communications with parents/guardians.

Teachers were asked to name the primary vehicle they use to convey academic information to their students and their parents/guardians. Consistently, teachers indicated that the primary method used for communicating academic information is the Infinite Campus Parent Portal. For example, the participating grade eleven English teacher shared, "I do rely on grade book in Infinite Campus as a way of parents being aware of what the grades are." The English teacher, like the other teacher participants, consistently shared that the primary location for providing academic information is Infinite Campus. This should come as no surprise as teachers are required to enter grades in a reasonable

115

amount of time to the Infinite Campus Portal, the primary repository for grades in this school (this is discussed in a previous section related to the overarching theme of Usage Patterns). Despite the information posted to the Infinite Campus Parent Portal, teacher participants were quick to assert that, like the parents/guardians previously discussed, the information presented in the Parent Portal reflects a one-way communication that oft must be supplemented by two-way communications. The reliance on the Parent Portal as the primary communication vehicle is concerning, to a degree, given the fact that all teachers consistently shared that the Parent Portal alone could not, satisfy the communication needs of all stake holders.

For example, the grade eleven science teacher captured the wider themes expressed in the focus groups stating that the Portal "Is one-way communication. It's a way for teachers to tell students and parents what grades have been earned. There's a lot that's missing from that in terms of being able to communicate." The science teacher expanded on this perception:

> It's not two-way and it doesn't explain anything more than a number. I could be thrilled that a student got a 68 because they struggled and a 68 is a wonderful grade for them, but I can't communicate that through grade book [Parent Portal]. Or a 95 is not good enough, right? Because I know the student should have aced something, or whatever the case may be.

The participating teachers agreed that students, along with their parents/guardians, demanded and deserved greater two-way communication, than is provided solely by the Infinite Campus Parent Portal. In nearly all cases, teachers shared that emails and phone calls are the primary two-way communication vehicles they used.

Teachers frequently commented that their two-way communications were inspired by an anomaly in academic patterns, failing grades, incidents of student misconduct, or in

response to a communication from a concerned parent/guardian. For example, the grade eleven social studies teacher exemplified the opinion of the grade eleven focus group participants stating, "My go-to is email for parent contact as the reasons everybody else stated. If email doesn't get me a response or there's something that I really do need to know that they've heard, I do use the phone." Affirmative nods from other teachers in the group suggested that they, too, relied primarily on email as their go-to method of two-way communication. To accentuate this point, the grade eleven math teacher shared, "I tend to gravitate toward email. I think it's the easiest method to get in touch and it doesn't have to be a synchronous, I can respond when I'm ready and they can respond when they're ready." The grade eleven English teacher intoned, "I primarily gravitate toward email, like others. I think that I can be very instantaneous when used correctly." The teacher continued, "It was a lot easier than being on the phone because I could look at it and read it from anywhere." The English teacher shared the advantage of using email as a two-way communication tool:

> I think the other advantage of email is that in the email, I can be very specific about what's missing and there's a trail. If it's a phone call and I leave a message, it could be deleted. The email is always there, and I can be very specific, this assignment is missing, this assignment is missing. And if anyone ever says, "Well, you never sent that." I'm like, "Well, here it is and here's your response back to it."

All teachers agreed that two-way communication with students and their parents/guardians is a requisite part of their jobs. However, based on the teacher comments, the researcher learned that teachers only made phone calls home as responses to parent requests or when the teacher wanted to discuss negative academic patterns.

117

For example, the grade nine English teacher shared, "If your child is failing, then that would be an email or call, but I don't email every single parent." Along the same lines, the grade eleven social studies teacher shared, "If a student is failing or if they haven't handed in things towards the end of the marking period, I will email, then call." Reflecting the theme that, teachers tend to gravitate first to email communications, the grade eleven science teacher shared, "I use email and when after a couple of times someone doesn't respond that I would say in a timely manner, and it depends on how important the matter is when I say timely, I will use the phone." While teachers indicated a preference to use email as a two-way communication vehicle, they also said that direct phone contact was an integral part of teacher-parent interaction.

The grade nine science teacher shared that academic information is presented via the Infinite Campus Parent Portal and, at times, automatically inspires two-way communication via phone call from a parent. The teacher shared, "I feel like I get that kind of responses with Infinite Campus. It depends on the grade that goes in. Since something is missing, it's like pretty much that day, then I'll get a phone call. The grade eleven English teacher agreed and shared, "I do rely on grade book in Infinite Campus as a way of parents being aware of what the grades are. But on occasion I will use the phone, especially in the case of something serious, like say plagiarism, where I think that more explanation might be necessary." It is noteworthy that both the grade nine and grade eleven focus group indicated a preferential use of email as a two-way communication vehicle and only limitedly mentioned the use of telephone calls. Similarly, the grade nine science teacher said, "I use mostly emails, but I will use phone

calls when absolutely necessary." The researcher concluded that teachers most utilized emails and conversations with students in their two-way communications.

Teachers commented that they immediately receive emails from students, or their parents/guardians when grades are posted into the Parent Portal. Moreover, the teachers shared that students commonly reacted not only via email, but also via direct conversations in the classroom. Thus, the researcher notes that the empirical Parent Portal data (grade postings) appears to galvanize the two-way communication layers of email and student-teacher classroom discussion. When asked about student reactions to the grades posted in the Parent Portal, the grade elven English teacher shared, "Either, if they see me after that moment, they come up and talk to me, or they will email me." Further, the grade eleven science teacher shared, "I would say there's an immediate reaction upon a new grade, I think a lot of times it's a quick reaction of the student, "That's a bad grade. How can I make it better?" The science teacher continued:

> I get plenty of reactions from, I would say mostly students when new grades are added to the grade book. Sometimes I get a very happy, positive reactions that's mostly in person. A student comes into class the next day say, "I can't believe I did so well on that quiz or that test." I would say more frequently it's the student reaching out because they're unhappy with their performance, they're already looking for a way to improve their grade.

All teachers in the focus groups strongly agreed with the science teacher's assessment that students often respond to their grades with interest in either celebrating their successes or looing to improve their performance.

Teachers commonly shared the perception that the Infinite Campus Parent Portal is a useful tool to convey academic information to parents/guardians and students. Additionally, the teachers shared, with consistency that other layers of two-way

communication often germinate from the information posted in the Portal. These two-way communication vehicles align with the parent/guardian perceptions, which collectively indicate that the posting of academic information in the Parent Portal often inspires two-way communication, most commonly via email. As a secondary two-way communication vehicle, it appears that parents/guardians and teachers, utilize phone calls only when the gravity of a given situation commands a phone call or when email fails to yield improved patterns. Administrator perceptions related to one-way vs. two-way communications follow.

Administrator Perception One-way vs. Two-way Communication.

Joining the parents/guardians and teachers, participating administrators shared their opinions related to the Infinite Campus Parent Portal and the extent to which it adequately addresses the communication needs/expectations of all stakeholders. With consistency, both administrators indicated that the Parent Portal cannot stand alone as a communication vehicle. The administrators additionally shared an expectation that teachers engage in two-way communicative efforts to ensure that parents/guardians are provided academic progress information that goes beyond what is presented in the Parent Portal.

Building Administrator #2 shared that teachers use the Infinite Campus Parent Portal as a one-way communication tool. The administrator stated, "The number one communication tool would be the grade book [Parent Portal]. While dealing with the gradebook, if a student is not doing well or reaching their potential, the Portal [would serve] as one communication." Building Administrator #1 shared a philosophy related to

the value of two-way communication and the expectation for teachers in this school setting. The administrator stated:

> The other expectation is that when the teacher was putting in grades that were indicating that the child was struggling, my expectation is that Infinite Campus was not the only source of communication. My expectation is that that has to be, and should always be, followed up with a phone call, a direct phone call. So, it could start with an email, but there has to be some phone communication with the parent if their child is really struggling and may be failing.

To probe deeper, and to accentuate the point that the one-way communication provided by the Parent Portal does not adequately meet the communication expectations of the administration, and does not meet the needs of parents/guardians, the administrator shared:

> I would never want it [the Parent Portal] to stand alone as a sole communication vehicle ever, ever, ever. However, I think it's a wonderful communication tool, but I would never want that to stand alone because there's so many variables that are not a part of it.

The administrator proceeded to provided examples of two-way communication that must be utilized by the teachers:

> An email, phone call conversation because there's a human piece of this and it's not just an electronic gathering of data. And that is what's really important. So, having these tools are fantastic, however, we're real people and we have a responsibility to the kids to get to that part of them as well. So, it is a great tool, but it's not the only tool.

All stakeholder groups (parents/guardians, teachers, and administrators) resoundingly supported the Infinite Campus Parent Portal as a valuable one-way communication tool. Study participants consistently indicated that the academic information presented within the Portal serves to provide necessary insights into a child's academic progress. However, all stakeholders indicated that the information presented within the Parent Portal cannot, by itself, meet the communication needs of parents/guardians, students, or administrators.

121

All teachers and administrators similarly cautioned that the information presented in the Parent Portal reflects a mere "snapshot" of the larger picture of a of a student's academic progress. We widen the aperture on that "snapshot" below.

"Snapshot" of a Larger Picture

All teachers and both administrators shared the opinion that the academic information presented in the Parent Portal reflects a "snapshot" of a broader student picture/profile. When discussing this perceived "snapshot," Building Administrator #2 was quick to assert that a number (grade), in isolation, posted to the Parent Portal, fails to tell an entire academic story. Only after multiple entries, multiple data points, can a student (or their parent/guardian) begin to fully understand student performance. The administrator stated, "Each one of those entries is like a "snapshot," the entire gradebook, looking at it as a whole, and seeing the bottom number of you have 380 out of 400 points, that's where you're going to get more of a bigger picture of what's going on."

Building Administrator #2 shared that that the Infinite Campus Parent Portal has merits, so long as the user accesses the information presented with the appropriate mindset. He shared that student users must understand that the grades posted reflect a "snapshot" in their academic portfolio. In isolation, the grade is less relevant. The student user must learn to view grades as a part of a larger narrative regarding their progress and/or regression. The administrator stated:

> As you watch the entry of the grades which, you're watching the entry of the grades. If you just keep waiting for that grade to be entered, when is it going to be entered? I took the test. You're waiting for that snapshot of what you did for one little piece. If you focus on that along the way, then you're losing the picture of what this is supposed to try to bring which is that growth that we hope is going to happen.

This building administrator was clear to assert that "The bigger picture is the most important piece. It's okay to watch the snapshots along the way because you want to see yourself look better in each picture, but don't get caught up in each little picture." The importance of using the Parent Portal to convey this "snapshot" of information to students, along with their parents/guardians is further developed by Building Administrator #1.

Building Administrator #1 also stressed the importance of using the Parent Portal to convey this "snapshot" of information to students and their parents/guardians. The administrated shared, "Department heads are following up, checking it [the Portal] to make sure their [teachers] grades are put in, so the parents do have a snapshot and understanding of what's happening with their child." The administrators expanded by sharing:

> The snapshot paints a picture of [the student], that's not just for their parents, it's also for other adults in their lives, like a coach or a club advisor or any other, teacher, administrator. Anyone who will see that picture and I think that they [the students] know that may motivate them to do what they need to do to perhaps get their work done and take their learning very seriously because it's not just the parent that's seeing it. It's others that are seeing it as well.

Along a similar theme, the grade eleven math teacher shared:

> The snapshot is a different snapshot for different teachers, depending on the timeliness of when you enter the grades. So, your math snapshot is different than your social studies snapshot because the math teacher is able to grade something in a much shorter time frame than somebody grading a five-page paper.

Teachers and administrators value the information presented within the Parent Portal. Each stakeholder group shared an awareness that a child's complete academic profile manifests itself only after the interested stakeholders view multiple "snapshots" of the entire academic picture. This is most salient for parents and their oft-compulsive children who may monitor posted grades not understanding that an isolated grade entry does not

fully define their academic trajectory nor wholly reflect the totality of their academic prowess. The researcher would now like to show how interview data shed significant light on the topic of Student Stress as perceived by parents, guardians, teaches, and administrators.

Theme 3 Student Stress

Student stress (as reported by parents/guardians, teachers, and administrators) is the third overarching theme that emerged during the analysis of the collected data. Some parents, and all participating teachers and administrators shared that the unrestricted access to the Infinite Campus Parent Portal could create stress for high school students. Each stakeholder group contributed valuable information related to Student Stress. Three sub-themes emerged as the researcher sorted the data generated through interviews and anecdotes.

Parent Opinion

The researcher asked participating parents/guardians to share their perceptions on the extent to which unrestricted access to the Parent Portal placed stress on their children. Responses from parents/guardians indicated that nearly half of the participants believed that the unrestricted access to the Parent Portal created increased stress and/or anxiety for their children. These stress conditions were reported by parents/guardians of both low, middle, and high performing students. The parents/guardians shared that stress was caused by the perceived reduction of students to numerical figures; propensity of their children to inflate the influence of grades relative to other students; compulsivity of monitoring for outcome feedback; negative feelings upon receiving a poor grade; and the anxiety inherent in waiting for grades. Conversely, some parents/guardians shared that

access to the Parent Portal did not increase stress. They asserted that the information is easily accessible and organized for users; the information opens lines of communication; the information provides real time feedback; the information allows for progress monitoring; the information eliminates ambiguity relative to performance. The researcher presents both sides of the Stress theme below.

Parent # 3, Parent #6, Parent #7, Parent #8, and Parent #9 all shared that unrestricted access to the Parent Portal created a stressful environment. These parents represent students achieving at low, middle, and high achievement levels, but are primarily parents of high performing students (Parent #3, Parent #6, and Parent #9) respectively. Parent #3, the parent of a high performing grade nine student, shared:

> I believe that the Portal presents stress because the numbers are there in black and white, as opposed to those same numbers can come up in a discussion that they might have with a teacher or a discussion that we might have at the kitchen table but once those numbers are seen in black and white, I think that it is an anxiety producer.

This parent echoed sentiments previously shared and further developed in the overarching theme dedicated User Perceptions, namely that there is value in the information presented in the Parent Portal, but numbers standing alone on the screen without greater, two-way communication, create stress conditions for her child. Parent #3, the parent of a high performing grade nine student continued:

> I believe [my child] would say yes, it is a stressor. I don't believe they would have said yes, it is a stressor before entering high school. But currently I would say that, yes, the Portal itself stresses them out/

The parent revealed that as their child has matured in school age, they are placing greater attention on grades, accessing the Portal with greater frequency, and this has had a deleterious impact on their emotional wellness.

Parent #6, the parent of a high performing grade ten student shared that her child frequently accesses his grades via Parent Portal. The parent shared, "He's constantly checking it, checking his grades." Reflecting and sharing a bit further, the parent continued, "Him and his own personality anyways, he would probably say he has a little bit of anxiety, and he's always stressed out about his grades. But being able to check the Portal adds to that." This theme of student anxiety is shared by Parent #7, the parent of a low performing grade eleven student. Parent #7 shared, "He's high anxiety, the Portal stresses him out." This parent continued by sharing that, the Parent Portal, created such stressful conditions for her child, that they no longer accesses the information. When asked if the child still access the Parent Portal, Parent #7 shared:

> No, I don't think so because I think he would be very stressed out if he did, because in general, he wants to do well. He doesn't. He would like to do well, even though he doesn't really put any effort into it. And I think looking at those grades and those comments would really upset him.

Parent #8, the parent of an average performing grade eleven student shared:

> I think he would say that it does put stress on him. Because, I know personally, if I get an email from his teacher, and I ask him, "Hey, did you check the Portal lately?" His response to me is generally, no, he really doesn't check it. And almost to the point of avoidance, because I think it does bring stress upon him.

Evident in the remarks shared by Parent #7 and Parent #8 is a theme that the negative performance information presented in the Parent Portal serves to reduce the frequency with which children access the Parent Portal. Similarly, Parent #9, the parent of a high performing grade eleven student, shared:

> Yes, it puts a stress on her because if she notices that something is negative that just goes against her personality, her work ethics. So, in that sense, yes. But on the other hand, it's a no, because I think it keeps her on track and keeps her accountable.

While Parent #7, Parent #8, and Parent #9 all indicated that the possibility of viewing information perceived to be negative could serve to impact the usage pattern of a student, a stark contrast is noted between Parent #7 and Parent #8, when compared with Parent #9. While Parent #7 and Parent #8 describe conditions that have ultimately precluded their lower performing children from accessing the Parent Portal, Parent #9 indicated that, although their child may be exposed to some negative information (potentially a poor grade), "It keeps her on track and keeps her accountable" The parent shared that this is a positive aspect of the Parent Portal and something their child appreciates.

Some parents/guardians of students at all achievement levels indicated that for some, the Parent Portal places stress on their children. However, other parents/guardians shared that the unrestricted access to the Parent Portal is beneficial and does not create stress conditions for their children. Parent #4, Parent #9, and Parent #12, representing the parents of a low performing grade ten student, a high performing grade eleven student, and a high performing grade twelve student (respectively), shared that unrestricted access to the Parent Portal does not create stress because: the information is well organized; the information increases student accountability; the information presented improves lines of communication and provides insights into academic performance; and assists with monitoring academic progress.

As it relates to the theme of clarity of information presented via the Parent Portal, Parent #1, the parent of a low performing grade nine student shared that the Parent Portal does not place any stress on her child, the parent shared:

> No, [no stress] because I think that the information is organized in a very clear and easily accessible way, where it actually, I think, makes her feel... Or when she

looks at it, she's more clear about where she stands. And so that helps take away some of that stress of not knowing.

While Parent #1 shared their opinions related to the organization of the information presented in the Parent Portal, Parent #12 expressed a similar contention, however added further detail related to added benefit of progress monitoring that the Parent Portal affords. Parent #12, the parent of a high performing grade twelve student shared that her child appreciates the accessibility to the Parent Portal because, "I think he likes to keep track of it. And I think that it does organize him. He does have a bit of an executive functioning issue with organization. I think it's very cut and dry." Further, Parent #12 shared, "I think it's definitely something that he likes that control of, and I think it helps and guides him as opposed to stressing him out."

In addition to the parent/guardian perception that the information presented in the Parent Portal is succinctly organized and allows for self-monitoring, Parent #4 shared the opinion that the Parent Portal provides opportunities for communication that may not have existed if the Portal were not in place. Parent #4, the parent of a low performing grade ten student, shared the following related to stress. "I would say no stress. I think it provides an opportunity for support that may not have been there." Parent #4 continued:

> If [my child] didn't have this pathway, then as a family, I would not know what was going on as quickly as I do today and I think that it could potentially help a student who struggling out there who may not have the ability to come forward to say, "Hey, I need help in this area.

While participating parents/guardians shared mixed opinions on the level of stress that unrestricted access to the Parent Portal places on their children, the teachers who participated in this study consistently shared that the unrestricted access to the Parent Portal certainly creates stress conditions for students. While the teachers did say that

there were benefits to Parent Portal access, for children, overwhelmingly they shared concerns related to the level of stress that the Parent Portal can create for some students. Teacher opinions related to the Parent Portal and student stress are presented below.

Teacher Opinion

Parents/guardians shared mixed opinions related to whether unrestricted access to the Parent Portal creates stress conditions for their children. The parents/guardians indicating that unrestricted access to the Parent Portal leads to stress for their children commonly shared that stress is caused by the perceived reduction of students to numerical figures; propensity of their children to inflate the influence of grades relative to other students; compulsivity of monitoring for outcome feedback; negative feelings upon receiving a poor grade; and/or the anxiety inherent in waiting for grades. While parents shared mixed emotions related to student stress and Parent Portal access, teachers were more consistent in their responses. Overwhelmingly, teacher participants indicated that unrestricted access to the Parent Portal creates stress for students. The teachers commonly shared that stress is caused by compulsive/frequent grade monitoring; placing too much attention on the perceived importance of grades; and perceived neuroses. However, the teachers were intentional in drawing a distinction between the frequencies with which high performing/ grade conscious students review the Parent Portal when compared to lower performing/less grade conscious students. Teacher opinions related to the Parent Portal and perceived levels of student stress appear below.

All participating teachers shared their opinion that students tend to be very grade conscious. The teachers agreed that when a student is increasingly grade conscious, they

tend to view the Parent Portal with a greater degree of frequency. For example, the grade

eleven science teacher shared:

> No one's forcing them to check their grades, so I would say they probably like the availability. If students don't want to check it, they just don't. I think most students would say they liked that they can see how they're doing on individual assignments and also overall.

However, the science teacher continued, "I've definitely had students where I think they

stress too much about looking at their grades and letting that be like the end all be all."

The grade eleven math teacher shared:

> I think we're very number conscious, no question. But there's different levels of stress and different baggage that each student carries. So, I think the availability of [the Portal] 24/7 helps both of those students [those that want access all the time, and those that are more passively monitoring].

The grade nine math teacher stated that for "A percentage of students, it [the Parent

Portal] does cause stress, especially for students who are conscientious about their

grades." The teacher continued, "Math Students that are in the middle of the road or don't

care too much about their grades and then no, there's no stress there. But for your

academically conscious student, then yes, it's stressful." While teachers shared that the

degree of grade consciousness influences the extent to which students access the Parent

Portal, this is not necessarily substantiated by participating parents/guardians. As outlined

in the parent opinion section above, students from all achievement levels appear to

experience varying degrees of stress as it relates to unrestricted access to the Parent

Portal. In addition to grade monitoring, teachers shared a common opinion that stress

conditions were often created for students as they accessed the Parent Portal with too

much frequency.

The grade eleven English teacher shared an anecdote related to a particular student and the frequency with which the student accesses the Parent Portal. The English teacher shared:

> It's the beginning of the second marking period, heading towards December break. And the student had checked grades 180 times in what was roughly, I don't know, 60 school days, there about. That means that she was checking her grades on average, about three times a day.

The English teacher continued:

> I think the neuroses stems from other problems in our society. The fact that they have technology in their pockets all the time, that this generation has grown up with social media, that they check all the time. And so, this becomes an extension of that.

The other eleventh grade teachers participating in this focus group wholeheartedly agreed with the English teacher's assertions, some even interjecting that the described usage pattern is limited compared to experiences they have had with their own students. The participating math teacher quickly added:

> If students have access to it [the Parent Portal] 24/7, the ones who are overly grade conscious will do much like the 180 checks [described the by English teacher previously]. But in many ways, it could also relieve stress because a student doesn't have such a short window of time to have to check it.

Furthering this discussion, the grade eleven science teacher attempted to place a more positive commentary on the excessive access pattern being discussed. The science teacher shared, "Yeah. And so, I think that ideally, it should be beneficial. I think knowledge is power. But as others have said, some students are far too obsessed with checking their grades too frequently." The grade eleven English teacher shared another anecdote:

> Student sometimes, especially if they're obsessive about... I'm dealing with [a student] right now that I'll post a grade. And two seconds later, I've got an email, "Why didn't I get this? Can I get more points? Can I have extra credit?" That is like extreme obsession, constantly checking it.

131

These sentiments were similarly shared by teachers who participated in the grade nine focus group. The grade nine English teacher shared, "[the Parent Portal] causes a lot of anxiety and also a misinterpretation of how they really are doing." Similarly, the grade nine science teacher stated, "It's definitely fed into the obsessive-compulsive behavior of kids. And it's sad in a way." Furthering this sentiment, the science teacher continued:

> There is a bit of a roller coaster of emotions with it probably, you know. But I think it does cause more stress where [the student is] constantly looking for that grade. But I think it's also a pretty powerful tool that they can really monitor their progress and be able to get themselves on track.

All teacher participants consistently shared, with great conviction, that the Parent Portal does cause stress for students. However, the teachers were firm in their assertions that students who misuse the Parent Portal, as evidenced by access patterns that border on compulsivity, tend to experience significant stress and anxiety. Additionally, teachers shared the opinion that there is a connection between grade consciousness and frequency of access to the Parent Portal. The teachers asserted, and unanimously agreed, that more grade conscious students are more likely to overuse the Parent Portal. The researcher concludes from study interviews that both teachers and parents/guardians believe that the Parent Portal can create stressful conditions for children. Administrator opinions about the parent portal and student stress appear below.

Administrator Opinion

As has been discussed, both parents/guardians and teachers have indicated that inappropriate or compulsive use of the Parent Portal can create stress conditions for students. The researcher asked participating administrators to comment on their perceptions related to student stress and unrestricted access to the Infinite Campus Parent

Portal. Consistent with the comments shared by teachers, building administrators shared

that the Parent Portal is both a useful and powerful tool that affords students and their

parents/guardians an incredible capacity to monitor academic performance. Despite this

reported benefit, the administrators recognized that some students overuse the Parent

Portal resulting in increased degrees of stress. Administrators, like their teacher

colleagues, were very specific in drawing a distinction between students who use the

Parent Portal occasionally and those who check/monitor their progress too frequently.

> For example, Building Administrator #2 shared:

> I think that if we look at it from the sense of positivity, they want to know what they got so they can do better. If they get caught up on it and they're perseverating on the grade, that's when it's unhealthy. That's when that is probably going to lead to somewhat of an anxious situation.

Building Administrator also described conditions in which over-frequenting the Parent

Portal could lead to heightened anxiety, Building Administrator #1 commented:

> I think at our level, our students, some students are obsessed with looking at their grades and finding them when things are posted or not posted. And they know which of their teachers is really fast in posting grades, they know the ones that maybe take a little longer.

However, like the teachers, Building Administrator #1 felt that not all student engaged in

such obsessive behavior. This same sentiment is expressed by parents/guardians who

shared that some of their children seldom access the Parent Portal. Additionally, the

teachers commented that some of their lower performing students never access the Parent

Portal. The Administrator continued:

> Some, not all, some students are just obsessed with checking Infinite Campus and checking the Portal to see the update with their grades and their own progress. Some don't and some do, some just like their parents, some are very obsessed with it, and some may be less obsessed with it.

All stakeholder groups found commonality in the potential that the Parent Portal holds for creating stress on children. The final overarching theme that evolved from the interview data received relates to Mental Models with sub-themes specific to parental engagement, shared responsibilities, and student responsibilities. Mental models and associated sub-themes will be discussed in the following sections.

Mental Models

As has been outlined in previous sections, nearly all stakeholders consistently shared that the information presented via the Parent Portal is valuable; serves to inform parents/guardians and students on academic progress; the information cannot stand alone as a two-way vehicle as it is a one-way tool; and that the information presented can cause stress conditions for students, if it is overly accessed. Stakeholders (parents/guardians, teachers, and administrators) similarly shared commentary related to their reactions when grades are posted to the Parent Portal. Parent/guardian reaction to information presented on the Parent Portal reveals, to some degree, their level of engagement in the academic lives of their children. The parent/guardian commentary reflected a variety of responses, to Parent Portal postings. For example, some parents believe that responding to the academic information presented in the Parent Portal is entirely the student's responsibility. Other parents indicated that when grades are provided via Parent Portal, a dialogue ensues with their children reflecting a mental model associated with shared responsibilities. Evident in the parent/guardian responses, overwhelmingly, is the theme that parents/guardians view academics, with a common mental model. This mental model indicates that academics, in particular grade monitoring, is a shared responsibility. This, along with a mental model that encourages the gradual release of responsibility

(commonly supported by parents at the high school level) were the consistent themes that surfaced in interviews with all parents/guardians.

Shared Responsibility/ Engagement

Interviews with parents/guardians revealed that all parents/guardians are knowledgeable of the Parent Portal and that they access the information. It has been previously noted in the Usage Patterns section of this chapter that, parent/guardian usage patterns differed, however, in nearly all cases, parents/guardians demonstrated a degree of engagement in the academic lives of their children. Most often, this engagement is demonstrated by engaging in academic discussions with their children, engaging in two-way communication with teachers (or other school officials), or securing additional supports for their children, e.g., tutoring/ extra help.

The most cited responses provided by parents/guardians related to their engagement in the academic lives of their children, is that a dialogue ensued with their children as a response to information presented in the Parent Portal. For example, Parent #3, the parent of a high performing grade nine student, shared:

> Sometimes as parents, I think we might place a little more responsibility or a little more independence on our children and forget that we are a stakeholder in their education. And using Parent Portal is a great way to learn exactly what it is they're doing, learn their patterns of study, learn their patterns of assessment, learn what they are required to do weekly or monthly so that a conversation can be had at home so that some support can be given if needed.

Parent #3 continued:

> I might have a reaction to a particular grade. For example, let's say it's a great grade, I am going to compliment my child. However, if I see a grade that is not particularly consistent with previous grades, we might have to have a discussion about.

Parent # 6, the parent of a high performing grade ten student shared that when they see a numerical grade posted to the Parent Portal, "I might say to them, well a lot of times they're telling me I didn't do well on this, or I bombed this pop quiz or whatever. We kind of talked about, well, that happens. And you just do the best you can every day." Similarly, Parent #2, the parent of an average performing grade nine student stated, "And maybe have a conversation about what will help you do better for them and what do they need from you to do better." So, sometimes it's just conversation." As mentioned by Parent #2, Parent #3, and Parent #6, Parent #11, the parent of an average performing grade twelve student shared:

> You look at it [the Parent Portal], you're like, "Okay, what does this mean?" So, then it brings another communication between you and your child or children. And sometimes it opens up a whole different conversation. It also sometimes opens up the conversation with the kind of relationship that that child has with their teacher.

Parent #12, the parent of a high performing grade twelve student shared a similar sentiment as is expressed by Parent #2, Parent #3, Parent #6, and Parent #11. Parent #12 stated, "I have the dialogue with [my child] about whether or not they tried their best." These sentiments, that parents/guardians react to the information presented via the Parent Portal via conversations with their children were echoed in nearly every interview with parents and are succinctly summarized by Parent #4 who shared, "I follow up with my child, ask him how he is doing, what is going on." With nearly unanimous consistency, parents described a pattern of engagement that most referenced the importance of dialogue with their children regarding academic achievement, patterns, or progress. This pattern of engagement crossed grade and achievement levels and indicates that many parents respond to the academic information presented in Parent Portal through active

136

dialogue with their children. However, some parents/guardians indicated that they furthered their level of engagement via two-way communication with school officials, including teachers, administrators, and or school counselors. The researcher elaborates on these sentiments below.

While participating parents/guardians universally shared that their engagement is reflected in the dialogues shared with their children, some parents expanded on their level of engagement by actively communicating with school officials (teachers, counselors, and administrators). These parents, like Parent #8 expressed the view that school officials and parents/guardians must be in partnership with one another. Parent #8, the parent of an average performing grade eleven student shared, "I really think its parents and schools working together to help support students." Parent #11, the parent of an average performing grade twelves student similarly shared, "Teachers and the parents are a team…Involvement and the Portal can be used very heavily as a tool. And it comes in very handy." The grade 9 science teacher echoed a similar sentiment and shared:

> I think it [the Parent Portal] plays a role where the parents that do check it are better informed of their kids' progress. And I think it gives parents a better opportunity to be able to reach out to the teacher. And get involved in a conversation as to like, "What can we do to help them?" Because I've gotten that, it's not always like, "Oh my kid failed. What happened?"

This partnership sometimes requires more active engagement on the part of the parents/guardian who engage in two-way communication with teachers. For example, Parent #9, the parent of a high performing grade eleven student shared:

> If I see [via Parent Portal] the first time there is a missing homework, I don't necessarily contact the teacher on the first note that something wasn't submitted, I would go to my child. But if I noticed that there were five in a row and my child hasn't done something, I would contact the teacher and say, "What can my child do to improve himself?"

137

However, this parent first begins a conversation with their child as an engaged dialogue. The parent stated:

> I have a conversation at home first to try to understand what happened and based on the conversation, I will go back to the teacher and try to figure out what can be done. Or the other thing is, well, maybe having my child resubmit the work or redo the work or try to resolve the work, resolve the issue.

Evident in these remarks is the same universal theme that parents become engaged, first through the information presented in the Parent Portal, then via conversations with their children. However, following conversations with their children or based on continuing patterns of questionable behavior, some parents/guardians choose to further engage in two-way communications with teachers or other school officials.

For example, Parent #7, the parent of a low performing grade eleven student, shared:

> I actually communicate quite frequently with his teachers. Since my child does have some learning disabilities, I do email back and forth. I will have phone conversations with many of his teachers. I would say every three to four weeks, I would contact at least one to two teachers, just to see how he's doing.

It should be noted that Parent #7 is one who uses the Infinite Campus Parent Portal with diminished frequency and repeatedly expressed (as outlined in the overarching theme of Usage Patterns) greater needs for two-way communication, those that exist beyond the capabilities and reach of the Parent Portal. Parent #10, the parent of a low performing grade twelve student shared "If I have a problem [evidenced by an unexpected grade posted to the parent portal] I would email the teacher and I would also speak to my child." Similarly, Parent #11, parent of an average performing grade eleven student indicated that, after reviewing academic information in the Parent Portal, "I help her, either have a meeting with the teacher or communicate with the teacher."

Taken as a group, Parent #7, Parent #8, Parent #9, and Parent #11, expressed that after speaking to their children, they follow up via two-way communication with the school. While these four parents indicated a need to speak with school officials, this does not assume that all parents are less engaged. In this study, all parents/guardians engaged their child in discussion after both had reviewed the information presented in the Parent Portal. Simply, parental engagement may not require further conversations with school officials as the initial conversation between the engaged parent and their child may serve the intended purpose.

In some instances, parents, whose children were struggling academically, felt the need to solicit additional support, beyond the school, after engaged discussion with their children and contact with school officials. These supports may take the form of tutoring or the arrangement of extra help opportunities for their children. For example, Parent #6, the parent of a high performing grade ten student shared:

> I mean, there have been instances where they may have been struggling with certain subjects. So, I don't think I've necessarily reached out to the school. I might tell my kids, see if you can get some extra help, or we've set up tutoring. I have set up tutoring for specific subjects if I felt like there was some struggle in a class. Because we tried to kind of nip it quick.

Similarly, Parent #3, the parent of high performing grade nine student identified an identical pattern of behavior that included speaking to their child and then, based on that conversation, proactively planning interventions when necessary. The parent shared:

> The Portal has the potential to propel a parent into school life. Using the portal is a great way to learn exactly what it is they're doing, learn their patterns of study, learn their patterns on assessments, learn what they are required to do weekly or monthly so that a conversation can be had a home and person that some support can be given if needed.

This theme of securing additional supports was, once again reiterated by Parent #11, the

parent of an average performing grade eleven student. Parent #11 shared:

> So, I also use that [the Parent Portal] to measure, to see the consistency, to see
> what's going on and to have the communication. If I see there's something that
> they're struggling with or she's struggling with in this case, then I'll get extra help.

Further, Parent #11 indicated that:

> I see a grade that's going down, I don't need to wait until the report card gets
> there. And even with that, I still have that communication all the time. "Where are
> you?" And if they need help, extra help, I don't just rely on the school.

Universally, parents shared that their engagement in the academic lives of their

children is predominantly through conversations with their children. A number of

participating parents shared that the information presented via the Parent Portal will

inspire further degrees of engagement to include contacting teachers, securing extra help,

or arranging tutors. However, most parents indicated that the opportunity for targeted

dialogue, based on the information they review through the Parent Portal, is the primary

vehicle through which they engage in the academic lives of their children.

Interviews with parents/guardians invoked a mental model of shared

responsibility among students, teachers, and their parents/guardians. Interviews and focus

groups also gave rise to other mental models. In some instances, parents/guardians,

teachers, and administrators discussed high school students' nascent independence. These

opinions reflect the transitional nature of high school adolescent who crave

independence. And as such, all stakeholders recognized this (independence) as an

important mental model.

Student Responsibility

Some parents freely discussed that their children wanted and deserved more independence as they matured. This independence often includes greater expectations and ownership of their academic performance. For example, Parent #7, the parent of a low performing grade eleven student shared:

> I also monitor [Parent Portal], not as frequently as I should, but I'm trying to actually give him more independence, and see if he has any kind of work missing. I will see if he's missing any assignments, and the actual responses on how he's doing, I can find out through that Infinite Campus.

Parent #7 continued:

> Lately, I've been trying to, like I said, step back. And if I actually look to see how many homework's he's missed, it's upsetting to me. And I want to just have the school deal with it at this point. I can't sit there, because it's putting a strain on our relationship, mother and son.

While Parent #7 indicated that they are taking a more hands-off approach to reviewing the Parent Portal to afford her child more autonomy and to avoid the tension that viewership creates, Parent #12, the parent of high performing grade twelve student, shared the need to allow her child greater independence.

> I view myself as a relatively hands-off parent, because I think it's important for [my child] to learn from their mistakes. I kind of, to be honest with you, take that backseat unless they ask me or unless a teacher has reached out that there is an issue and then I will step up and in.

Further Parent #12 shared:

> I look when the grades are posted for specific tests that they're concerned about, but generally with my children being as independent as they are, I don't look unless I feel like I need to.

Parent #12 stated a theme shared less consistently, but evident in other conversations with parents: "I think it's definitely something that he likes that control of." Building Administrator #1 shared a similar thought:

I think many parents are looking at it [the Parent Portal]. However, I think there are also many parents that leave the looking at it up to their children, because what our goal is for them to become these independent young people and so when our kids go off to college."

This realization of the growing independence of children as they mature through their school age years is reinforced by Parent #8, the parent of an average performing grade eleven student. Parent #8 shared:

[My child] likes for us to build that trust to let [my child] fly. And we try to build that trusting relationship, where we're not really peeking into that, and going on the Portal, and looking at grades, and this assignment because they're not always uploaded, maybe accurate."

Participating administrators shared similar sentiments related to a mental model consistent with the growing independence of high school students. For example, Building Administrator #1 shared:

At the high school level, there are parents that are less involved just because the goal of our kids is to become independent young people. And for some, they leave it up to their kids to just tell their parents how [they] are doing.

The administrator continued:

Students have a sense of responsibility of getting things in on time, doing their work. Their job is being a student right now. And what they're trying to do is they're trying to prepare themselves as the best that they can so when they go into college or go into a career or whatever they choose to do for their future, and this is their job. I think many of them do look at it that way, they really have a sense of responsibility and at a click of a button, either [they] or their parents are able to see a snapshot of how they're actually doing.

Parent #7, Parent #8, Parent #12, and Administrator #1 clearly identified a mental model consistent with the growing independence of children as they mature in school age. It must be underscored that while their responses indicated a propensity to afford children more independence, this willingness did not indicate that parents should (or did) abdicate responsibilities. Rather, parents plainly indicated that they continued to engage their

142

children in academic discussion and similarly agreed that school performance is a responsibility shared among all stakeholders (students, parents/guardians, and administrators).

Conclusion

The first research question in this study investigated the Infinite Campus usage patterns of participating stakeholders, parents/guardians, students (as reported by their parents/guardians, teachers, and administrators), and teachers. The analysis of the data found that all parents/guardians used the Parent Portal for one of the following reasons: to review their child's grades; determine if there were any missing assignments; to assess student progress; to review a teacher grading policy; to review attendance patterns; to access transcripts; or to access quarterly report cards. Parent usage of the Infinite Campus Parent Portal fell along a spectrum of usage patterns that include daily access, weekly access, or quarterly access. Parent/guardians, at all grade levels, indicated a familiarity with the Parent Portal and shared that they did view the academic information presented within the Parent Portal. However, while all participating parents utilized, to some degree, the Parent Portal, some choose to access the platform with greater frequency than others. Parents whose access is more limited, indicated that they did not frequently review the Parent Portal because they expect their high school student to grow increasingly more independent, and that they expect their child to actively communicate school related matters, without their need to over supervise.

Student usage patterns as described by parent/guardians, teachers, and administrators consistently indicated that students, frequently monitor their academic performance via the Parent Portal, in some cases, to the point of compulsively reviewing

their progress. Student use of the Parent Portal, like the usage patterns of parents/guardians, fell within a range. This spectrum included infrequent (if at all) us, quarterly use, weekly use, daily use, or compulsive use of the Parent Portal. The frequency of student usage (as reported by stakeholders) varied and is only marginally connected to the child's academic performance level. Responses indicated that low and average performing children tend to review the Parent Portal with less frequency, but this is not universally applicable. In general, nearly every parent/guardian indicated that their children access the Parent Portal. Teachers and administrators reported that more frequent patterns of use were found amongst higher performing (grade conscious students), and assertion that is substantiated by the parents/guardians of higher performing students.

The analysis of the data revealed that teacher usage patterns were largely dictated by expectations placed upon teachers by the administrative team. All participating teachers indicated an understanding of grade entry expectations and the value inherent in posting grades, in real time, to the Parent Portal. Teachers and administrators universally shared that the Parent Portal is viewed as a central repository for posting and reporting academic information to parents/guardians and students. However, it should be noted that, despite the known usage of Infinite Campus to provide academic information to parents/guardians and students, both stakeholder groups (teachers and administrators) shared an understanding that the information presented in Infinite Campus could not, stand alone as a communication vehicle for parents/guardians or students.

The data revealed commentary that the singular posting of a grade, commonly referred to as a grade entry, reflects a "snapshot" of the student's academic profile. Both teachers and administrators indicated that isolated grade entries fail to tell an entire

academic story. Only after multiple entries, multiple data points, can a student (or their parent/guardian) begin to develop an understanding of student performance in each subject area. For this reason, teachers indicated an awareness relative to the frequency with which they enter their grades and endeavor to complete grade entries in a timely manner following the "reasonable standard" established by the administrative team. This understanding, of grade entries as a singular "snapshot" is increasingly relevant as it relates to the students, or the parents/guardians, who frequently monitor each grade entry to the point of compulsivity. Teachers and administrators commonly shared that it is essential that students, along with their parents/guardians recognize that an isolated grade entry does not define their academic trajectory nor wholly reflect the academic prowess. Similarly, teachers and administrators shared concerns relative to student behavior patterns that border on compulsive use of the Parent Portal.

The second research question that guided this study is related to the perceptions of stakeholders (parents/guardians, teachers, and administrators) related to the Infinite Campus Parent Portal and its utility as a communication vehicle. The analysis of the data found that all parents/guardians demonstrated a familiarity and understanding of the information available to them via the Infinite Campus Parent Portal. Parents specifically shared that one of the greatest benefits of the Parent Portal is the fact that information presented via the Parent Portal is done so with great clarity, is easily understood, and allows for a real time accounting of their child's academic progress. Administrators shared their perceptions of the utility of the Infinite Campus Parent Portal and commonly stated that the accessibility the Parent Portal proves beneficial to students and parents/guardians alike. Administrators, like parents and guardians, shared common

perceptions related to the powerful nature of the information presented, the ability to monitor progress, and the role the Parent Portal plays in transmitting information to invested stakeholder groups. Similarly, teachers indicated that the primary method used for communicating academic information to parents/guardians and students is the Infinite Campus Parent Portal.

However, all stakeholders maintained that the Infinite Campus Parent Portal, despite its known benefits, could not stand alone as a sole communication vehicle. Parent/guardians, teachers, and administrators shared that the information presented in the Parent Portal, served as a useful one-way communication tool, but, additional layers of communications, particularly with teachers, were needed to supplement the purely numeric information presented in the Parent Portal. Commonly, stakeholders shared that the most utilized two-way communication vehicles included emails and phone calls. Such two-way communications were most often prompted by concerning academic patterns, failing grades, incidents of student misconduct, or in response to a communication received from parents/guardians.

The third research question that guided this study is related parent/guardian engagement in the academic lives of their children, in particular the parent/guardian mental models related to shared responsibilities or student responsibilities. The analysis of the data found that parent engagement in the academic of lives of their children is demonstrated through the parent's willingness to engage in academic discussions with their children; engage in two-way communication with teachers (or other school officials); or willingness to secure additional supports for their children, e.g., tutoring/

extra help. Parents and guardians universally reported that they were engaged in the academic lives of their children through conversations and dialogue related to academics.

Some parents shared commentary related to the growing independence of their high school child and indicated that the child must assume a more independent role in their academics as they mature. These sentiments were similarly echoed by building administrators and teachers. However, despite the expectation that high school students grow increasingly more independent, commentary from parents/guardians, teachers and administrators did not reveal any abdication of responsibility for supporting and monitoring the academic progress of students. Rather, stakeholders shared that, while student mature in school age, and grow increasingly more independent, the responsibility of monitoring is still shared across all stakeholders.

CHAPTER 5

Introduction

This case study explored the landscape, usage, and perceptions of parents/guardians, teachers, and administrators related to the Infinite Campus data management system, at the high school level in a New York suburban district. This study explored the usage pattern of parents/guardians, teachers, and administrators, and endeavored to examine the role that the Infinite Campus Parent Portal played in bridging a communication gap between schools and residences. This study addressed three research questions. The first questions related to the user (teacher, administrator, and parent/guardian) usage of the Infinite Campus Parent Portal. The second research question investigated the user perceptions of the Infinite Campus Parent Portal and its utility as a communication vehicle. The third research question explored the extent to which the information presented via the Infinite Campus Parent Portal influences parent/guardian engagement in the academic lives of their respective children.

The data analyzed consisted of two focus group interviews. The first focus group included grade nine teachers of math, science, social studies and English. The second focus group included grade eleven teachers of math, science, social studies, and English. In addition to the focus group interviews, the researcher interviewed two building administrators and eleven parents/guardians. Parent/guardian participants represented students from grade nine through grade twelve of different achievement levels ranging from low performing to high performing students. Analysis of the data spawned four key findings.

First, parent/guardian Infinite Campus usage patterns varied for a number of reasons. Teachers commonly reported that low performing students (and their parents/guardians) were less likely to view the academic information presented in the Parent Portal, however, this was not represented commonly by parents/guardians. All participating parents/guardians shared usage patterns that indicated a degree of usage of the Parent Portal. Second, some parents/guardians indicated that the accessibility of grades, via the Parent Portal, placed stress on their children, particularly low performing children. Other parents/guardians indicated that the accessibility of grades via the Parent Portal assuaged feelings of stress for their children. Teachers and administrators shared that the unrestricted access to the Infinite Campus Parent Portal, at times, created stress conditions and/or compulsive behavior amongst high performing students. Third, parents/guardians, teachers, and administrators indicated that the Infinite Campus Parent Portal, a one-way communication vehicle, could not stand alone as a sole communication tool bridging the communication gap between schools and residences. Lastly, parents/guardians, teachers, and administrators shared agreement that monitoring and communicating, via one-way and two-way communication vehicles reflected shared responsibilities of students, parents/guardians, teachers, and administrators. This chapter will discuss the findings of this study, and related these findings to the research questions, the theoretical framework, and the literature previously presented in chapter two.

Interpretation of the Findings

The theoretical framework that guided this study included contributions from both Joyce Eptsein's (2001) Spheres of Overlapping Influences and Peter Senge's (1990) work related to learning organizations, mental models, and shared vision. Epstein (1987)

defined a Theory of Overlapping Spheres of influence asserting that students learn more when parents and teachers recognize their shared goals and responsibilities for student learning (Epstein, 1987). Schools assume a critical role within the spheres defined. School programs that promote parent involvement increase the potential for shared responsibilities and student achievement (Epstein, 2001). Further, Epstein (1995 & 2009) developed a framework related to parent involvement in schools. The framework presents a useful tool for educational leaders to think systematically about the ways in which parents can become involved in the schooling of their children (Epstein & Voorhis, 2010). Within the framework established by Epstein, one recommendation is particularly relevant to this study: communicating- e.g., designing and conducting effective forms of two-way communications (Epstein & Voorhis, 2010, p.2). The study explores the Infinite Campus Parent Portal as a communication vehicle to foster effective partnerships with parents/guardians as key contributors to the overlapping spheres of influence.

One of the research questions that guided this study investigated user (parent/guardian, teacher, and administrator) perceptions of the Infinite Campus Parent Portal. Stakeholder perceptions indicated that the Infinite Campus Parent Portal serves as an effective one-way communication vehicle but fails to meet two-way communication needs of all stakeholders; the Infinite Campus Parent Portal provides an appropriate "snapshot" of data to parents/guardians and students; and unrestricted access to the Infinite Campus Parent Portal can create stress for students.

Commentary shared by parents/guardians, teachers, and administrators indicated that the Parent Portal has great utility as a one-way communication vehicle. This study showcases the universally shared belief of parents/guardians, teachers, and administrators

that two-way communication between schools and households is extremely important. Stakeholders consistently shared that two-way communication between schools and households was often required to supplement information presented via the Parent Portal. All stakeholder groups indicated that the Infinite Campus Parent Portal is an incredibly valuable tool that affords users with insights into a student's academic progress/ performance. All study participants indicated that the Parent Portal, could not by itself meet the needs of parents/guardians and fails to meet the spirit of the two-way communication goals as described by Epstein (2010). The vast majority of parents indicated that the one-way communication characteristic of the Infinite Campus Parent Portal feel short of their school outreach needs. Parents/guardians shared that, after reviewing the academic information presented in the Parent Portal, they sorely needed additional two-way communication (phone calls or emails) to gain a more comprehensive understanding for their child's academic progress, and overall well-being. Similarly, teachers and administrators strongly felt that the Infinite Campus Parent Portal needed to be augmented with robust regimen of two-way communication.

Driven by the research question related to user perceptions, teachers, and administrators, like parents/guardians, explicitly shared their perceptions of the Infinite Campus Parent Portal. Consistently, teachers and administrators shared commonalities with parents/guardians indicating that the academic information presented via the Parent Portal does not meet their communication needs. The study showed that while parents/guardians often initiated two-way communication, teachers, largely were the prime movers in contacting parents/guardians concerning their child's atypical academic patterns, failing grades or incidents of student misconduct. Both administrators stressed

that grades posted in the Parent Portal are merely an entrée to home-school communication which must be regularly augmented with a phone call or email to parents. Beyond the commentary related to one-way vs. two-way communication, study participants shared the perception that the Parent Portal provides an adequate "snapshot" related to student academic growth/ performance.

Further related to the researcher question relative to user perceptions, all stakeholders shared that the Infinite Campus Parent Portal provides a useful "snapshot" of information related to a student's academic performance. This study found common perceptions amongst teachers and administrators related to the importance of viewing the academic information present in the Parent Portal as part of bigger picture. Teacher and administrators commonly shared that isolated grade entries ("snapshots") do not define a student's academic trajectory, nor do they wholly reflect a student's academic prowess. Teachers and administrators shared that some students utilize the Parent Portal to the point of compulsivity. Such behavior indicate that some students fail to recognize the broader narrative. Teachers and administrators were consistent in sharing that a student's academic profile only begins to manifest itself after multiple grades are entered into the Portal. Further, all stakeholders indicated that some students utilize the Parent Portal compulsively. As reported by some parents, students are checking the Parent Portal to the point of obsession, a sentiment that was widely substantiated by all teachers and both administrators.

Participants shared their perceptions regarding stress conditions associated with compulsive use of the Parent Portal. Teachers and administrators commented that some students misuse the parent portal and fail to recognize that isolated grade entries do not

define their academic profile. This study found commonalities between teacher and administrator perceptions related to the potential misuse of the Parent Portal, particularly amongst high performing students. Teachers and Administrators shared that high performing students utilize the Parent Portal too frequently, compulsively checking their grades, leading to increased feelings of stress. Parents and guardians shared that, while the Parent Portal could lead to some degree of compulsive behavior and may create stressful conditions for some children (across all achievement levels), the accessibility of academic information may mitigate stress as students can monitor their progress in real-time.

The research question that investigated user perceptions found that all stakeholder groups, parents/guardians, teachers, and administrators recognize the importance of two-way communication; believe that unrestricted access to the Parent Portal can create stress conditions for students; and, that the Parent Portal provides a useful "snapshot" relative to student academic progress.

An additional research question that guided this study investigated the extent to which the accessibility of academic performance information (grades) posted to the Parent Portal, influences parent engagement at the secondary level. The researcher's theoretical framework included contributions from both Epstein (2010) and Senge (1990). Epstein (2010) indicated that best results for students are maximized, when the three spheres, family, home, and community interact symbiotically (Epstein, 2010). The researcher connected recommendations from Epstein to the work of Senge (1990) related to learning organizations, mental models, and shared vision (1990).

Senge defined mental models as the assumptions, generalizations, pictures, and images which are deeply rooted in our minds and influence how we understand the world and our actions (Senge, 1994). The lens (or mental model) with which parents view the importance of school-to-home communication, along with the parents' beliefs about their own roles and abilities, as they relate to supporting their children(s) academic trajectory, influences their level of engagement in school related matters.

Mental models are the generalizations or deeply- rooted opinions in the minds of individuals. These mental models serve to impact the perceptions and actions of an individual, and ultimately influence an individual's behavior (Senge, 1994). This study found that the mental models of parents/guardians relates to role-construction and the purpose the parent/guardians serve in monitoring the academic progress of their child. "Parents role construction defines parents' beliefs about what they are supposed to do in their children's education; parents' sense of efficacy for helping their children succeed in school focuses on the extent to which parents believe that through their involvement they can exert positive influence on educational outcomes" (Hoover-Dempsey & Sandler, 1997 p. 3). The research found that a parent's role construction shapes their mental model and their levels of engagement.

The mental models possessed by parents/guardians, teachers, and administrators are centered in the importance of shared responsibility and partnership between schools and parents/guardians. As children achieve greater independence and begin to establish their own identity, parents assume more passive roles in their academic lives (Brown, 1989). Despite the notion that parents/guardians become more passively involved in the academic lives of their children, at the high school level, this study revealed that nearly

all participating stakeholders embraced a mental model of shared responsibility, manifested through partnership and positive academic outcomes. Consistent with Epstein is the notion that partnership and shared responsibilities between and among parents/guardians, students, teachers, and school officials is intrinsic to student success.

Parents consistently shared that they were engaged in the academic lives of their children through monitoring the Parent Portal and engaging their children in conversations related to academics. However, some parents shared a greater degree of engagement as they commented on their efforts to contact teachers via two-way communications (email and/or phone calls) or efforts to provide academic support via tutoring or arranging extra help with teachers. Some parents, shared a belief that their children needed less involvement from parents as they are increasingly independent and possessed the requisite skills to monitor, track, and improve (when necessary) on their own academic performance. All stakeholders recognized coming-of-age and emerging student independence as a prominent mental model and key to the findings of this study.

The importance of effective communication, comprehension of mental models (shared responsibilities), and recognition of the essential role that parents play in the academic lives of their children were essential aspects and themes of this study. Parent involvement "Remains a useful lever for children, effectively communicating with parents and accessing this known resource requires targeted efforts and commitment from both parents and schools" (Harris & Goodall, 2008). If schools are to meet the communication needs of parents/guardians consistent with recommendations provided by Epstein (1995) and recognize the impact that mental models have on parent engagement, then the learning organization must develop a culture that encourages contributing

members to and process to improve the organization as a whole (Bulak et al., 2008). The learning organization must be flexible and adaptable to new ways of thinking (Senge, 1994). Parent/guardian usage patterns of the Infinite Campus Parent Portal were clearly influenced by their own mental models related to role-construction, perceptions of utility, and views on shared responsibilities. This study found that the district must continue to adapt it communication vehicles to meet the needs of all stakeholders.

Relationship between Findings and Prior Research

The first major finding from this study included the perceptions of parents/guardians, teachers, and administrators related to the utility of the Infinite Campus Parent Portal as a communication vehicle. Legislative efforts have consistently sought to address a perceived communication gap between schools and residences. Notably, these efforts were designed, in part, to encourage schools to enhance school to home communication and are evidenced in both the Elementary and Secondary Education Act (ESEA), No Child Left Behind Act (NCLB), and others. Consistent with the literature reviewed, this study found that both one-way and two-way communication are essential to the engage parents/guardians in the academic lives of their children (Ames, 1993; Hoover-Dempsey & Sadler, 2005; Olmstead, 2013). This study revealed that contributing stakeholders do not believe that the information presented via the Parent Portal serves as two-way communication. Stakeholders indicated, with great consistency, that the Parent Portal serves in the capacity of a one-way communication vehicle that must be supplemented via more informative two-way communication methods. This study outlined commonalities across stakeholder groups that indicated that the Infinite Campus Parent Portal, could not meet the communication needs of parents/guardians, nor

does it meet the communication expectations established by the sites' building administrative teams.

This study found that parents/guardians, teachers, and administrators believe that the Infinite Campus Parent Portal does not serve as an effective two-way communication vehicle. Participants commonly shared that the quantitative information available via Parent Portal present useful numerical feedback but does not entirely meet their communication needs. Study participants shared agreement with the literature which defines one-way communication as efforts to inform, while two-way communication often includes dialogue between contributing stakeholders. Existing literature indicates that explicitly expressed communication may include either one-way or two-way exchanges (Berger, 1991; Grant, 2011; Graham-Clay 2005; Goodall, 2016; Olmstead, 2013). One-way exchanges are defined as those that inform parents of school related matters. Two-way communication methods require dialogue between teachers and parents. Such measures may include parent-teacher conferences, open houses, and other school-based community activities (Berger, 2000). The findings of this study reflect agreement with the above, as stakeholders consistently shared that the posting of a grade in the Parent Portal does not reflect two-way communication. Teachers, parents/guardians, and administrators indicated that a grade posted in Infinite Campus reflected an appropriate one-way communication but fails to provide a holistic picture of the students' academic profile.

This study found that parents believed that the information presented via the Parent Portal is purely numerical and leaves the user with limited depth of understanding related to the child's academic needs. This finding is substantiated by the literature which

speaks to the value of intentional, two-way, positive communications designed to enfranchise parents/guardians into the school community and provide depth/details. The literature reveals that when parents receive useful, meaningful, insightful, and positive communications from teachers and staff, the nature of the relationship between schools and households improves. The learning of the child is prioritized and the parents' belief in their own ability to support learning, at home, improves (Olmstead, 2013). Effective communications enhance a parent's level of confidence in the school and fosters interest in both their child's academic progress and learning (Ames, 1993; Epstein 1990). This study revealed that the posting of grades to the Parent Portal does not align itself with high quality communications as outlined by Ames (1993), Epstein (1995) nor Olmstead (2013). In the same way that effective communication leads to greater degrees of parent/guardian engagement, there are factors that dissuade such engagement or disenfranchise parents/guardians from the school community.

This study did not reveal parental disenfranchisement, rather the findings of this study indicated that all participating parents were engaged in the academic lives of their children. While patterns and depths of engagement varied, all parents interviewed shared that they engaged their children in academic discussions, were willing to provide support, and reviewed the Parent Portal at some point during a given school year. Factors that dissuade parent/guardian engagement in the academic lives of their children include diminished trust between residences and schools, socioeconomic factors, language barriers, previous negative encounters with schools or school officials, and a host of other factors (Anderson & Minke, 2007; Brandt, 1998; Finders & Lewis, 1994; Graham-Clay, 2005; Harris & Goodall, 2008; Harris et al., 2008; Henderson & Mapp, 2002; Jackson,

2011). Additionally, parent involvement in schools may be limited because of limited faith in the school system, helplessness, or negative personal school related experiences that parents had as students (Bemak & Cornely, 2002). While there are a number of factors that could serve to limit parent engagement in schools or the academic lives of their children, such disenfranchising factors were not surfaced in this study.

The literature similarly speaks to the associated benefits of parent engagement. When parents are actively involved in their children's education, students earn higher grades, test scores, enroll in higher-level programs, pass their classes, earn credit, attend school regularly, have better social skills, demonstrate improved behavior, adapt well to school, graduate, and go on to postsecondary education (Henderson & Mapp, 2002). The school studied boasts a 98% graduation rate (NYSED, 2019), a rate that surpasses the county and state average.

This study revealed that parental engagement is a likely contributor to the student success as participating parents/guardians shared their willingness to provide home based assistance. Parents expressed a willingness to assist with task completion, monitor assignments, engage in conversation related to academics, and communicate with school officials. Such efforts are consistent with the Hoover-Dempsey & Sadler (2005) who indicate that parent engagement, through active support, leads to positive academic outcomes. Consistent with the literature, participating parents indicated an awareness to the positive academic outcomes associated with their engagement. These associated benefits often include, increased self-regulatory behavior and higher social functioning skills, increased academic performance, and lower rates of retention and failure (Fan and Chen, 2001; Jeynes, 2007; Henderson & Berla, 1994; Henderson & Mapp, 2002; Hoover-

Dempsey & Sandler; Patrikakou, 2015). While the factors that impact parent/guardian engagement in the academic lives of their children varied, this study revealed that parents/guardians were aware of positive impact they have on their children's academic trajectory.

An additional finding of this study was related to mental models and the extent to which participating stakeholders view academic progress monitoring and support as shared responsibilities. The literature reveals that parents choose to become engaged in the academic lives of their children for a variety of reasons (Deslandes & Bertrand, 2005; Hoover- Dempsey & Sadler, 1997). This study revealed that parent participants were are engaged in the academic lives of their children. Parents shared that their level of engagement was demonstrated by conversations with their children related to academic progress along with progress monitoring via Parent Portal. These conversations were often inspired by, either a grade posted to the Parent Portal, or the existing open lines of communication established between parent and child. The literature similarly reveals that there are a myriad of factors that either encourage or discourage parental engagement further outlined above). For example, some parents may view engagement as specific behaviors, expectations, values, installed upon their children and/or the provision of support with assignments (Jarrett & Coba-Rodriguez, 2017; McWayne et al., 2008). Parents commonly shared that their engaged efforts included attempts to contact teachers, counselors, or administrators. Further, parents/guardians also shared that after receiving communications from the school, they would support their children through tutoring or extra help, as necessary. This study revealed that all participating parents/guardians were engaged in the academic lives of their children via progress monitoring, conversation

with their children, efforts to secure additional supports when needed, or other interventions.

This study found that, overwhelmingly, parents/guardians utilized the Parent Portal to review their child's academic performance. While their usage patterns varied, all participating parents/guardians indicated a familiarity with the Parent Portal and shared that they used the platform throughout a given school year. This study found that parents/guardians believed that the information presented via Parent Portal was useful and that it afforded their children the opportunity to grow more independent. Consistent with Bird (2006), this study found that student information systems provide a useful mechanism for parents to monitor student performance while preserving a degree of student autonomy; essentially allowing parents to intervene when needed (Bird, 2006). The findings of this study support these notions as all participating parents/guardians indicated that they reviewed the Infinite Campus Parent Portal, with some degree of frequency.

Consistent with the literature, this study found that parents/guardians appreciated/valued the accessibility of the information presented in the Parent Portal. Prior to the widespread use of student information systems, parents/guardians relied upon fragmented information provided by their children or periodically shared via report cards. The findings of this study substantiate the work of Patrikakou (2015) and Bird (2006) who similarly found that data management systems afford parents with access to unabridged information in real-time (Bird, 2006). Further, Patrikakou (2015) found that student information systems afford parents/guardians and students the opportunity to review academic progress and monitor performance in a systematic way. Portals foster

increased communication between parents/guardians and teachers regarding a child's academic progress (Patrikakou, 2015). The findings of this study reveal commonalities with the above as parents consistently indicated that the greatest elements of the Parent Portal include real-time academic performance information; accessibility of information; clarity of information provided; and the organization of the content included therein.

An additional finding of this study was related to parent/guardian, teacher, and administrator perceptions of student usage patterns related to Infinite Campus. The findings of this study indicated that, while student usage patterns varied, all children access the Parent Portal throughout a given school year. Study participants indicated that unrestricted access to the Parent Portal had both positive and negative effects on children. Like the findings of this study, the scholarship indicates diverse opinions related to the impact that unrestricted access to Parent Portals has on students (Bird, 2006; Geddes, 2009; Greitz Miller et al., 2016; Lacina, 2006; McKenna, 2016; Patrikakou, 2015; Reed 2008; Seldow, 2010). Through online grade books, students are presented with an opportunity to view their grades as frequently, or infrequently, as they may desire (Juedes, 2003; Juedes, 2005; Schrand, 2008). This study revealed consistency with the literature as parents/guardians, teachers, and administrators indicated that student usage patterns varied. As reported by study participants, frequent access to student information systems served as a useful feedback tool for students willing to access the online platform.

This study found that, from the teacher and administrator perspective, high performing students were more likely to review the Parent Portal with greater frequency when compared to average and low performing students. This assertion was not

supported by parents/guardians. Parents/guardian universally indicated that their children, representing all achievement and grade levels, reviewed the Parent Portal throughout a given marking period. This study substantiated the literature as participants shared that their students/children demonstrated diverse Parent Portal access patterns. Consistent with the literature, the latitude afforded to children, to review or ignore the Parent Portal, reflected an associated benefit of Infinite Campus. Teachers, administrators, and parents/guardians all indicated that some students access the Portal, to review their grades, with far greater frequency than others. The work of Seldow (2010) supports these findings. Seldow (2010) found that the students who checked their online grades had higher degree of self-efficacy, when compared to the control group, those students without such access.

This study additionally found commonalities with the literature related to stress conditions that may manifest themselves when students are afforded unrestricted access to the Parent Portal. For some students, the Parent Portal creates increased degrees of stress and anxiety. Participating teachers and administrators indicated that some students over-frequent the Parent Portal and that such behaviors border on compulsivity. The teachers and administrators indicated that this pattern of behavior was more commonly found amongst high performing students. Parents/guardians similarly indicated that some children overuse the Parent Portal. The work of McKenna (2016) supports these findings. McKenna (2016) cautioned that the use of on-line gradebooks could potentially discourage students from experimenting, making mistakes, or taking risks because of constant assessment and reporting of performance. Further, McKenna (2016) found that,

such systems could serve to exacerbate increasingly high degrees of stress, anxiety, and depression in students.

Beyond the possibility of increased degrees of student stress, this study substantiated existing literature related to student reliance on the outcome feedback provided via the Parent Portal, compared against the process feedback provided in classroom settings. This study found that all stakeholders recognize that the information presented via the Parent Portal reflects outcome feedback, rather than critically important process feedback. Parents/guardians, teachers, and administrators routinely referred to this as a "snapshot," indicating that the quantitative information found in Infinite Campus serves to provide insights into academic progress; provides for real-time academic updates; and allows for a window into the students' academic trajectory. However, teachers and administrators, and many parent/guardian study participants, indicated that this "snapshot" fails to provide adequate detail. Further, numbers (grades), in isolation, do not provide adequate information about a student's academic needs, prowess, abilities, and/or deficiencies. Similar themes related to the outcome feedback available via the Parent Portal are evident in the literature. The literature reveals that student information systems transmit outcome feedback but do not effectively transmit information related to the learning process (Geddes, 2009; Greitz Miller et al., 2016; Lacina, 2006; McKenna, 2016). This study found that teachers, parents/guardians, and administrators demonstrated views consistent with the literature which indicate that that the data provided via an online gradebook is purely outcome based and fails to provide the critically important process feedback that schooling requires. The literature indicates that student information systems have utility in providing outcome feedback and serve as a useful tool for

164

progress monitoring (Geddes, 2009; Greitz Miller et al., 2016; Juedes, 2003; Juedes, 2005; Lacina, 2006; McKenna, 2016; Schrand, 2008). These assertions above were substantiated throughout this study.

The final finding of this study is related to teacher usage patterns of Infinite Campus. This study did not reveal teacher commentary related to the associated benefits of Infinite Campus from a time management perspective. The literature reveals that, for teachers, online gradebooks improve teacher efficiency by increasing the amount of time available to be dedicated to lesson planning, curriculum, and instruction, as less time is dedicated to determining averages and calculating grades (Migliorino & Maiden 2004). Further, online gradebooks afford teachers the capacity to calculate averages, weight assignments, create report cards, and develop information sheets, class averages and other statistical measurements of class performance, with the click of a button (Migliorino & Maiden, 2004). While the literature speaks to the associated benefits (for teachers) related to on-line gradebooks, this was not a theme that was revealed in this study. The site studied has been using data management systems for nearly a decade. The absence of teacher commentary related to the advantages provided by such data management systems, is likely on account of the routine nature with which the Portal is used. The researcher speculates that teachers limitedly commented on such benefits as they were commonly known by each teacher. However, teachers did comment on their use of the Parent Portal to convey academic information to parents/guardians and students.

This study found that teachers utilized the Parent Portal as the primary vehicle from which academic performance is communicated to parents/guardians and students. The teachers did not indicate that their preference to do so was based upon the time

saving factors outlined above. Rather, teachers shared that grade entries were a commonly known expectation. Parent usage patterns were similarly explored in this study. This study found that all participating parents/guardians indicated a familiarity with, and an understanding of, the functions, features and information available for their consumption. Parent usage patterns followed a spectrum, from frequent use, to limited use, based on individual needs, views of their children as students, and beliefs related to the child's growing independence as they mature in school age. Unfortunately, there is a dearth in the literature related to parent/guardian, student, and teacher usage patterns as it relates to data management systems. Further studies are needed to connect stake holder usage patterns more adequately to wider constructs.

Limitations of the Study

Due to the nature of qualitative research, the small sample size may limit the capacity to validate findings. Yin (2018) indicates that qualitative research, particularly research with small sample sizes, can create conditions where generalization are less relevant. However, the goal of qualitative research is to gain insights into the lived experiences of study participants within a targeted sample. Stake (1995) recommends that the researcher select those that best help us understand a given case" (p.56). However, despite careful selection of study participants, it is essential to note that their lived experiences do not necessarily connect or transfer to the lived experiences of others. While the findings of this study cannot be generalized to other populations, they are applicable to wider theoretical constructs (Yin, 2018).

It is also particularly relevant to state that there is a degree of homogeneity in the population of students and staff in the site studied. According to the New York State

Department of Education 2018, the demographics of the school studied include the following: 51% of the high school population is male, 49 % female; 82% of students are white, 2% multiracial, 1% Black, 6% Hispanic or Latino (NYSED, 2018). The County reports an 88% high school graduation rate compared against the overall state average of 80%. These student demographics do not necessarily exist in all districts and the findings cannot be generalized to other populations (Yin, 2018).

An additional limitation of this study is the researchers' use of a purposeful and deliberate sampling technique. With intentionality, the researcher invited grade nine and grade eleven teachers of math, science, English, and social studies to participate in this study. These subject areas were selected as they reflect the core academic disciplines. Teacher participants were asked to participate in this study via recruitment flier and email and were then selected based on the grade levels and subject areas they instructed. The researcher solicited the involvement of two building administrators, via recruitment flier and email. These two administrators possessed decades of experiences as building administrators along with in-depth foundational awareness of the functions, features, and utilities of the Infinite Campus Parent Portal. However, their views, as administrators could serve to bias commentary shared and the narratives they produced.

The researcher acknowledges that his role as an administrator, could have served to influence the responses provided during the focus group interviews with teachers, individual interviews with parents/guardians, and the individual interviews with administrative colleagues. The researcher was intentional in messaging that teacher participation was entirely voluntary and would have no implications related discipline or supervision. Teacher participants were entirely aware that they would not be penalized or

disciplined for responses shared during the focus group interviews. Similarly, administrative colleagues were informed that their participation was entirely voluntary and that their responses would be kept anonymous. Administrators, like teachers, were fully aware that they would be permitted to review the transcripts of the interviews and could redacted portions, as necessary.

Additionally, the researcher sought parent/guardian participants with the intention of securing three parents for each grade level, grade nine through grade twelve. The researcher identified a range of achievement levels (achievement bands), as evidenced by student grade point averages. The researcher identified students representing each grade and achievement level and solicited parent/guardian participation via recruitment flier along with email communications. For each grade level and at each achievement band, a total of five parent/guardians were selected randomly and then contacted to participate in this study; a total of sixty parents/guardians were contacted via recruitment flier and email. When necessary, follow-up phone calls were placed. This process allowed the researcher to secure parent/guardian participants reflecting a range of grade and achievement levels, however the sample size remained relatively small.

The researcher selected parent/guardian participants based on responses received and with the intention of securing representative parent/guardian participation. The researcher had to ensure that each grade band and grade level had equal representation to gain a more holistic understanding of the lived experiences of parent/guardian participants. This degree of intentionality limited the participation of certain parents/guardians who may have shared rich data relative to their lived experiences using the Infinite Campus Parent Portal. In total, 21 individuals participated in this study: two

168

building administrators, eight teachers, and eleven parents/guardians. Parents/guardians, like teachers and administrators were made entirely aware that their responses would have no bearing on their children and their voluntary participation in the study could be terminated at any time. Given the sample size, homogeneity of student demographics, and voluntary nature of parent/guardian participation, the findings of this study cannot be applied to other settings.

Implications for Future Research

This case study explored the landscape, usage, and perceptions of parents/guardians, teachers, and administrators related to the use of the Infinite Campus Parent Portal. The findings provided insights into the usage patterns of teachers, parents, administrators, and students (as reported by parents/guardians, teachers, and administrators). The lived experiences of these contributing stakeholders provided rich and valuable information; student voices were absent from this study.

Teachers and administrators commented on the role that Infinite Campus plays in providing "snapshots" of academic performance, shared insights related to inappropriate student access patterns (compulsive use of the platform), and concerns related to the incomplete nature of isolated grade entries. Each of above concerns directly relates to students and the manner with which they utilize the Parent Portal. Future research, including an investigation of student usage patterns, from the perspective of the students, would prove beneficial. A case study involving students from all achievement and grade levels would reveal rich information regarding their usage patterns. Similarly, insights into student perceptions, rather than teacher, administrator, and parent/guardian

perceptions would provide a more holistic understanding of the merits and detriments of data management systems akin to Infinite Campus.

This study similarly found that parents/guardians were engaged in the academic lives of their children. Parents/guardians expressed their engagement through a willingness to involve themselves in discussions relative to school related matters. Parents universally shared that they review the Parent Portal, are willing to provide home based supports. When required, parents shared that they furthered their engagement through two-way communication with school officials. Further research into parent engagement, as inspired by information presented via data management systems would prove beneficial. It is recommended that future research consider a comparative case study approach, one that is designed to explore parent/guardian usage patterns in districts similar, and more importantly, dissimilar to the site studied. Such a study may reveal vast differences in the usage patterns, perceptions, and degrees of parent engagement as evidenced by similarly frequent or infrequent usage of grade reporting Portals. The inclusion of an alternative district would allow for a comparative analysis inclusive of divergent socio-economic statuses, graduation rates, student demographics, etc. Such a comparative analysis would provide greater insights into the prevalence of data management systems, stakeholder usage patterns, and potentially allow for the generalization of findings to other settings.

While this study investigated the usage patterns and perceptions of various stakeholders related to the Infinite Campus Parent Portal, further research into the widespread application and use of Learner Management Systems, those including and/or like Google Classroom may prove beneficial. During the 2019-2020 school year,

districts, regionally, nationally, and internationally were confronted with a global pandemic related to the rapid spread of COVID-19. Districts faced entirely new conditions and needed to adjust their practice to meet the social, emotional, and educational needs of their students. Many districts became increasingly reliant on learner management systems to maintain continuity in instruction, support communication, and provide academic resources to students. Learner management systems became an essential aspect of school reopening plans as they rapidly filled a void in school capacities to provide both synchronous and asynchronous instructional opportunities to students. Learner management systems often afford users the capacity to communicate, comment on submitted work, post messages, provide resources, along with a host of other functions and features. This study examined the data management system Infinite Campus, and its utility as a communication vehicle. Learner management systems often allow for greater two-way textual communications. As learner management systems continue to be used by districts in both the pre- and post-pandemic school environments, further studies are needed to explore the perceptions and usage patterns of stakeholders. Such studies would serve to further advance the collective understanding of these systems and the role they play in in meeting the communication needs of students and their parents/guardians.

This study found that some parents assume reduced roles in the academic lives of their children. Some parent commentary revealed infrequent access to the Parent Portal. Parents who shared such limited usage patterns indicated an expectation that, as their children mature in school age, responsibilities are relinquished to their child. It is likely that there are many other factors that afford some parents the capacity to relinquish

greater academic responsibilities to their children. Further studies into the role that data management systems play in facilitating or restricting parents from relinquishing responsibilities to their children would be recommended. Such studies could explore student self-efficacy and the role data management systems play in affording students' greater ownership, accountability, and responsibility relative to their academic performance. Once again, such studies would be enhanced by the inclusion of student commentary, interviews, and voices.

Implications for Future Practice

Throughout the past several decades, schools nationwide have become increasingly reliant on data management systems, in particular Parent Portals, as communication vehicles utilized to share academic information with parents/guardians and students. The district could consider: the creation of a shared vision related to communication; an exploratory committee to examine present communication practices tasked with making recommendations for enhancements/improvements; additional professional development for staff related to two-way communication; continued social emotional supports for students exhibiting high rates of stress along; academic programming via assemblies and/or small group instruction related to stress; and, increased educational opportunities for students related to the appropriate use of Infinite Campus.

This study revealed that parents/guardians were entirely aware of the information available via the Infinite Campus Parent. Parent/guardians shared positive commentary related to the quality of the information presented, ease of access, and the insights the Parent Portal provides related to their child's academic performance. However, despite

these positive comments, parents/guardians, teachers, and administrators were quick to share that the Parent Portal serves as a one-way communication vehicle. Some parents/guardians indicated that the Parent Portal failed to provide relevant commentary on the social and emotional wellness of children. Parents shared that the information provided via Parent Portal is purely quantitative and does not provide a holistic representation of a given child (this is particularly relevant to commentary related to perceived levels of stress amongst students within this high school). If the learning organization is to further refine and advance the use of effective forms of two-way communication, then further development of a shared vision, relative to communication, is recommended.

The district could consider the creation of an exploratory committee tasked with examining two-way communication. This communication committee could work toward the development of a shared vision related to two-way communication. It would be recommended that the committee first review the existing communication mechanisms utilized, then determine the extent to which these vehicles align with the districts mission, vision, and the Superintendent/ Board of Education goals. After reviewing this information, the committee could survey the broader community to determine the extent to which parents/guardians feel their communication needs are presently satisfied. With these data points secured, the committee could make recommendations to the Superintendent and the Board of Education.

By creating a committee that includes all constituent groups, reviewing present practices and surveying the community, this committee could ensure that the recommendations made will represent the needs of all stakeholders; are attainable by

schools; and will have a greater likelihood of success (as they would include recommendations and insights from practitioners). In addition to the development of a shared vision, professional development should be considered for staff related to two-way communication.

This study revealed that parents/guardians expect two-way communication to further the information presented in the Parent Portal. With consistency, all stakeholders (parents/guardians, teachers, and administrators) shared that the Infinite Campus Parent Portal serves as a useful one-way communication tool. Despite this understanding, teachers indicated that the Portal served as one of the primary communication vehicles most frequently utilized. Professional development could be considered to further explore two-way communication vehicles or techniques that would afford teachers with an efficient way to provide more substantive information to parents/guardians. For this professional development to be impactful it should be designed by teachers or other experts in the field and provide the teachers with useful strategies that are attainable and manageable. As stakeholders become more familiar with best practice approaches, these individuals could serve an influential role in the developing a shared vision related two-way communication (previously mentioned). In addition to potential professional development related to two-way communication, additional supports for teachers and parents/guardians related to student stress may similarly be required.

Consistently, teachers, parents/guardians, and administrators indicated that the prevalence of unrestricted access to the Parent Portal, creates stress conditions for some students. Stress has a significant impact on adolescents including, but not limited to, potential damage to long term health, compromised immune systems, greater propensity

for illness, and the potential for anxiety and self-injurious behaviors. Given the known dangers of stress, as they relate to adolescents, the district may consider the factors that contribute to stress conditions for children. It is known that stress conditions for students can be mitigated through the intentional planning and interventions of school officials and parents/guardians. Schools are in unique position as they can change their practices and policies to reduce stressful conditions and improve the climate for their children.

The district could consider the extent to which unrestricted access to the Parent Portal creates stress conditions for students. This information could be secured through a student survey, intentionally developed to determine the perceptions of students as they related to the Parent Portal. It is entirely possible that the survey results secured may contradict the opinions that were shared by teachers, administrators and some parents/guardians who participated in this study. If this is the case, then no further action would be required. However, if the survey data revealed heightened levels of stress in students, attributed to unrestricted access to the Parent Portal, then the district could consider the development of additional supports for students including small group, whole grade, and/or whole building programming (depending on the needs evident in the survey results).

Should the need be identified, the district could consider assembly programing for students related to stress management, appropriate use of the Parent Portal, etc. Additionally, the district should continue their present efforts to identify students that engage in compulsive behaviors, related to Parent Portal access. The district will continue to connect students exhibiting signs of distress to trained mental health professional both on-site and beyond. Finally, the district could consider restricting Parent Portal access

with a set usage limit per day, week, or month. Further, the district could explore disabling access to the Parent Portal at specific hours of the day or night to limit compulsive grade monitoring. Similar to the discussion above, the creation of an exploratory committee reflecting a variety of stakeholders could serve to develop a vision for Parent Portal usage and make recommendations for the implementation of such practices.

The above-mentioned implications for future practice present challenges for building leaders including: (a) development of a shared vision related to two-way communication that is both attainable for teachers and meets the needs of parents/guardians. This vision will need to conform to the overall vision of the district and be representative of a broad base of constituents. Additionally, in order for this vision to last, it will require the collective buy-in of teachers, district-wide; (b) collective buy-in from the administration, parents/guardians, district leadership and the Board of Education will similarly be required in support of any newly presented/established vision related to two-way communication; (c) should the vision require teachers to engage in practices outside the scope of their existing work, negotiations may be required with the teachers collective barging unit to ensure that any new communication responsibilities fall within the boundaries of the existing contract; (d) compressive review of existing communication expectations coupled with an exploration of best practice approaches related to two-way communication. Such a review will prove time intensive and potentially costly depending on the approach taken; (d) development of on-going professional as it relates to mental health and supporting students as they navigate feelings of stress. The financial implications of securing additional experts in the field of

adolescent mental health could prove cost prohibitive; (e) implementation of access restriction, e.g., limited Parent Portal access at various times of day/night or restricting access to a set maximum. Such efforts could serve to create tension both with students and their parents/guardians, particularly with those that frequently access the Parent Portal.

To mitigate some of the concerns mentioned above, the district could solicit teacher, parent/guardian, and administrator volunteers, those with an investment in the creation of a shared vision related to two-way communication. This group, of willing volunteers, could work collaboratively during school hours and/or after school to meet scheduling needs. Additionally, the district employees a number of highly qualified mental health professionals. These mental health professionals possess a vast knowledge of adolescent learners, the implications of stress, and the importance of stress management techniques. This team could be empowered to further explore patterns of student behavior as they relate to Parent Portal access. Using information obtained from survey data, coupled with usage pattern data, this team could examine trends and develop interventions. Further, this team could develop professional development opportunities for staff, presentations for students, and programming for parents/guardians with a focus on stress reduction and appropriate use of Portal technologies. Finally, district staff could engage students in discussions related healthy habits and further educate children related to the importance of process feedback, rather than outcome feedback (grades posted to Parent Portal). Each of the above recommendations requires intense investment and collective buy-in from stakeholders, district-wide.

Conclusion

This case study explored the landscape, usage, and perceptions of parents/guardians, teachers, and administrators related to the Infinite Campus Data Management System, at the high school level in a New York suburban district. This study similarly explored the usage pattern of parents/guardians, teachers, and administrators, and endeavored to examine the role that the Infinite Campus Parent Portal plays in bridging a communication gap between schools and residences.

This study revealed that all parents/guardians possessed an understanding of the information available, via the Infinite Campus Parent Portal. Additionally, all participating parents/guardians indicated that the Parent Portal is powerful and useful tool. Parents consistently shred that the Parent Portal has utility for the purposes of tracking, monitoring, and supporting their children academically. Overwhelmingly, parents/guardians indicated that supporting the academic needs of children is a shared responsibility, however the degrees of engagement varied from parent to parent. Universally, parents indicated that they reviewed the Parent Portal for academic information. This study revealed that some parents chose more active patterns of engagement. The rationale for varied degrees of engagement, at times, reflected the parent/guardian perception of the importance of student autonomy and the growing need for independence as students mature through their school age years.

This study similarly revealed that parents/guardians perceived Infinite Campus Parent Portal as a useful one-way communication tool. With commonality, parents/guardians shared that the information provided allowed for increased progress monitoring of their children. However, as is outlined in the limitations section of this

chapter, the district studied boasts an incredibly high graduation rate of 98%. Additionally, the district studied reflects a largely middle-class suburban school. It is surmised that parent/guardian engagement is a likely contributor to the high graduation rates, contributes to parent/guardian access to the Parent Portal, and results in more frequent conversations with students regarding academic performance.

This study revealed that teachers and administrators shared the perceptions that, high performing students, overuse the Parent Portal. All teacher and Administrator participants shared the concern that certain students utilized the Parent Portal in a compulsive manner. Parents/guardians similarly shared that the prevalence of grades, with unrestricted access for students, could serve to create stress conditions if not appropriately managed. These parents shared that their children check the Portal, hourly at times. This compulsive behavior is concerning and should continue to be evaluated and monitored by the district.

Presently, this is a dearth in the scholarship related to the proliferation of data management systems, user perceptions, usage patterns, and the extent to which the prevalence of such data management systems encourage/discourage parent/guardian engagement in the academic lives of their children. This study explored one such data management system, Infinite Campus. The findings revealed of variety of themes, most notably the utility of the Infinite Campus Parent Portal as a one-way communication vehicle, the consistent use by all parents/guardians, concerns related to compulsive student use, and that Portal usage (by parents) often leads to increased degrees of engagement, via conversations with their children. Future studies should consider the inclusion of student voices in the research design and/or a comparative case study

approach (comparing either similar or dissimilar districts). Such studies would begin to

fill the void in the literature and provide greater insights into the implications of

widespread use of data management systems in schools, nationwide.

APPENDIX A: DISTRICT PERMISSION (SUPERINTENDENT)

XXXXXX, Superintendent of Schools
XXXXXX Union Free School District
XXXXXX
XXXXXX, New York XXXXX

Dear Dr. XXXXXXXX

I am a Doctoral Student at St. John's University in Queens, New York. I am respectfully requesting your support in conducting a research study that I believe will serve to advance our shared understanding of the role the Infinite Campus Parent Portal serves in communicating with parents/guardians.

The purpose of this study is to further investigate the teacher, administrator, and parent perceptions along with usage patterns, as they relate to Infinite Campus, at the Secondary School level.

The current body of research indicates that higher rates of parent involvement correlates to enhanced success for our students, academically, socially, and beyond. A gap in the research exists related to the role that the Infinite Campus Parent Portal plays in bridging a communication gap between schools and residences. Additionally, the perceptions of teachers, administrators, and parents/guardians (related to the role that the Infinite Campus Parent Portal plays as a communication vehicle) remains similarly under explored.

I am reaching out to you to request permission to conduct individual interviews via ZOOM with the parents/guardians of students in grade nine and grade eleven. Additionally, I would like to request your permission to engage in on-site focus group interviews with teachers representing the core academic subject areas (math, science, social studies, and English) grade nine and grade eleven. Finally, I would like to request your permission to interview the Principal and Assistant Principal in your High School. These two administrators possess an in-depth knowledge of the Infinite Campus platform, expectations related to staff usage, and the portals utility as a communication vehicle.

Please note that since Long Island schools, where the data is being collected, remain in phase 4 of New York State's reopening plan, data may be collected in schools with your permission, and in keeping with all site guidelines, as per state regulations. However, should conditions change, or if guidance from New York State dictate that schools must close, the planned in person interviews with administrators and the planned focus group interviews with teachers, would be conducted virtually using ZOOM.

Should you grant me permission to complete this study, you will be provided a copy of the invitation that will be sent to the participants (administrators, teachers, parents/guardians). As with all research studies, the data collected during the focus groups and individual interviews, will be kept confidential. Pseudonyms will be used, and all identifiable information will be stricken from the record. Copies of the focus group questions, and individual interview questions are attached if you would like to preview the content.

Thank you for your time and consideration of this request. If you would grant me the permissions required to complete this study, please email the approval to Michael.larson17@my.stjohns.edu. If you have any questions, please do not hesitate to contact me at (xxx) xxx-xxxx. The faculty advisor who will be supporting my efforts, Dr. xxxx, can be reached at (xxx) xxx-xxxx. For any questions about the rights of research participants, you may contact the University's Human Subjects Review Board, St. John's University, (xxx) xxx-xxxx.

The results of this study will inform educational leadership and provide our learning organization with further insights into the perceptions of teachers, parents/guardians, and administrators as they relate to the Infinite Campus Parent Portal as a communication vehicle.

Respectfully,

Michael K. Larson

APPENDIX B: INFORMED CONSENT (PARENT/GUARDIAN INTERVIEW)

Invitation and Consent to Participate in a Research Study (Interview)

Dear Participant:

You are being invited to participate in a research study designed to investigate the perceptions of parents/guardians as they relate to Infinite Campus, in particular the Parent Portal features provide within this data management system.

I will be conducting this study as part of my doctoral dissertation for St. John's University, Department of Administration and Instructional Leadership.

Please note that, the school district to be studied has develop reopening plans consistent with the expectations enumerated in the New York State School Re-opening plans. As such, site supervisors have determined that visitor access to school buildings will be restricted. In an effort to honor the expectations of the district to be studied, these interviews will be conducted via ZOOM. Should conditions change, guidance documents be revised, or site supervisor's permit, these interviews may occur in person, consistent with all site guidelines and state regulations.

This study will help to better inform educational leadership on parent/guardian usage patterns, perceptions, and the utility of the Infinite Campus Parent Portal as a communication vehicle.

This portion of the research study will consist of an individual, one-on one interview, conducted via ZOOM. This interview will be scheduled at a mutually convenient time and take approximately 30 minutes. An audio recording of the interview will be made so that the data may be transcribed and further analyzed. You will be provided an opportunity to review the audio recording and request that all, or a portion of the recording be destroyed. Additionally, you will have the opportunity to withdraw your participation. Please know that pseudonyms will be used during the transcription for all proper names to maintain confidentiality. No identifiable information will be present in the formal record of your interview.

All consent forms will be kept separate from the transcription data to ensure that the names and identities of all participants are kept confidential. You will not be linked to any of the information provided or used in this study. Please know that participation in this study is entirely voluntary; you reserve the right to end your participation in this study at any time.

All information collected via your participation in this interview will be kept confidential and anonymous. This study has been approved by the Superintendent of Schools and the Institutional Review Board of St. John's University.

If you have any questions or concerns, please email me at Michael.larson17@my.stjohns.edu, or feel free to call me at (xxx) xxx-xxxx. You may also contact the faculty advisor who will be supporting my efforts, Dr. xxxx. For any questions about the rights of research participants, you may contact the University's Human Subjects Review Board, St. John's University, (xxx) xxx-xxxx.

Thank you for your potential participation in this study,

Respectfully,

Michael K. Larson
Agreement to Participate

Yes, I agree to participate in the study described above, either virtually or in-person

_____   _____
Participant's Signature   Date

_____   _____
Researcher's Signature   Date

APPENDIX C: INFORMED CONSENT (ADMINISTRATION INTERVIEW)

Dear Participant:

You are being invited to participate in a research study designed to investigate the perceptions of Administrators as they relate to Infinite Campus, in particular, the Parent Portal features provide within this data management system.

I will be conducting this study as part of my doctoral dissertation for St. John's University, Department of Administration and Instructional Leadership. The purpose of my study is to further investigate the teacher, administrator, and parent/ guardian perception and usage patterns, related to Infinite Campus, at the Secondary School level.

Please note that since Long Island schools, where the data is being collected, remain in phase 4 of New York State's reopening plan, data may be collected in schools with the permission of the site supervisor, and in keeping with all site guidelines, as per state regulations. However, should conditions change, or if guidance from New York State dictate that schools must close, the planned in person interviews with administrators would be conducted virtually using ZOOM.

The current body of research indicates that higher rates of parent involvement correlates to enhanced success for our students, academically, socially, and beyond. A gap in the research exists related to the role that the Infinite Campus Parent Portal plays in bridging a communication gap between schools and residences. Additionally, the perceptions of teachers, administrators, and parents/guardians (related to the role that the Infinite Campus Parent Portal plays as a communication vehicle) remains similarly under explored.

This portion of the research study will consist of an individual, one-on-one interview, conducted at a mutually convenient time. I anticipate that the interview will take no longer that 30 minutes. An audio recording of the interview will be made so that the data may be transcribed and further analyzed. You will be provided an opportunity to review the audio recording and request that all, or a portion of the recording be destroyed. Additionally, you will have the opportunity to withdraw your participation. Please know that pseudonyms will be used during the transcription for all proper names to maintain confidentiality. No identifiable information will be present in the formal record of your interview.

All consent forms will be kept separate from the transcription data to ensure that the names and identities of all participants are kept confidential. You will not be linked to any of the information provided or used in this study. Please know that participation in this study is entirely voluntary; you reserve the right to end your participation in this study at any time.

All information collected via your participation in this interview will be kept confidential and anonymous. This study has been approved by the Superintendent of Schools and the Institutional Review Board of St. John's University.

If you have any questions or concerns, please email me at Michael.larson17@my.stjohns.edu, or feel free call me at (xxx) xxx-xxxx. You may also contact the faculty advisor who will be supporting my efforts, Dr. xxxx, at xxx-xxx-xxxx. For any questions about the rights of research participants, you may contact the University's Human Subjects Review Board, St. John's University, (xxx) xxx-xxxx.

Thank you for your potential participation in this study,

Respectfully,

Michael K. Larson

Agreement to Participate

Yes, I agree to participate in the study described above.

_____   _____
Participant's Signature   Date

_____   _____
Researcher's Signature   Date

APPENDIX D: INFORMED CONSENT (TEACHER FOCUS GROUP)

ST. JOHN'S UNIVERSITY

Invitation and Consent to Participate in a Research Study (Focus Group)

Dear Participant:

You are being invited to participate in a research study designed to investigate the perceptions of teachers as they relate to Infinite Campus, in particular the Parent Portal features provide within this data management system.

This study will help to better inform educational leadership on teacher usage patterns, perceptions, and the utility of the Infinite Campus Parent Portal as a communication vehicle. I will be conducting this study as part of my doctoral dissertation for St. John's University, Department of Administration and Instructional Leadership.

Please note that since Long Island schools, where the data is being collected, remain in phase 4 of New York State's reopening plan, data may be collected in schools with the permission of the site supervisor, and in keeping with all site guidelines, as per state regulations. However, should conditions change, or if guidance from New York State dictate that schools must close, the planned in person teacher focus group interviews would be conducted virtually using ZOOM.

This portion of the research study will consist of a focus group interview lasting for approximately 30- 60 minutes. An audio recording of this focus group interview will be made so that the data can be transcribed and further analyzed. You will be provided the opportunity to review the audio recording and request that all, or a portion of the recording, be destroyed. Additionally, you will have the opportunity to withdraw your participation. Please know that pseudonyms will be used during the transcription for all proper names to maintain confidentiality. No identifiable information will be present in the formal record of your focus group participation.

All consent forms will be kept separate from the transcription data to ensure that the names and identities of all participants are kept confidential. You will not be linked to any of the information provided or used in this study. Please know that participation in this study is entirely voluntary; you reserve the right to end your participation in this study at any time.

All information collected via your participation in this focus group will be kept confidential and anonymous. This study has been approved by the Superintendent of Schools and the Institutional Review board of St. John's University.

If you have any questions or concerns, please email me at Michael.larson17@my.stjohns.edu, or feel free to call me at (xxx) xxx-xxxx. You may also contact the faculty advisor who will be supporting my efforts, Dr. xxxx at xxx-xxx-xxxx. For any questions about the rights of research participants, you may contact the University's Human Subjects Review Board, St. John's University, (xxx) xxx-xxxx.

Thank you for your potential participation in this study,

Respectfully,

Michael K. Larson

Agreement to Participate

Yes, I agree to participate in the study described above.

_____ _____

Participant's Signature Date

_____ _____

Researcher's Signature Date

APPENDIX E: INTERVIEW PROTOCOL (PARENT/GUARDIAN)

Interview Protocol

Opening:

Thank you for taking the time to participate in this interview concerning parent/guardian perceptions related to the Infinite Campus Parent Portal. Your participation in this interview supports my research study on parent/guardian, teacher, and administrator perceptions related to the Infinite Campus Parent Portal. The purpose of this study is to gain greater insights into parent/guardian, teacher, and administrators' perceptions of Infinite Campus, specifically the Parent Portal, and the role it plays as a communication vehicle between schools and residences. Your participation in this study will provide valuable information related to school to home communication, use of Infinite Campus, and the extent to which we (as a high school) satisfy, or fail to satisfy, communication needs of parents at the secondary level.

Overview

During this interview I will ask approximately 15 questions. The entire interview will be captured in an audio recording to allow for an accurate accounting of our conversation. The only people who will know what is said are you and I. The discussion and transcripts from this interview will be kept entirely confidential. When the results of the interview are shared, your name will not be included. Do you have any questions before we begin?

Interview Questions

1. Can you please tell me a little bit about your role within the school community?
2. How many children do you presently have enrolled in the high school setting?
3. How would you describe your child as a student?
4. What is your opinion on the role of communication between schools and residences at the high school level?
5. As a parent, how does the school keep you informed?
   a. *Based on your reply, do you feel that these efforts meet your expectations/needs?*
6. As a parent of a high school student, what is your preferred method of communication related to the academic performance of your child?
7. Can you share with me the extent to which you presently utilize Infinite Campus? As a parent, what information do you access when utilizing the Parent Portal?
   a. *If the parent does NOT use the Parent Portal, why not?*
8. Can you share with me information related to your exposure to the Infinite Campus Parent Portal, e.g.:
   a. *How were you apprised of the platform?*
   b. *What type of guidance/ support was provided to you as the parent/guardian?*

      c.   What is your opinion of the directions/supports provided to you as the parent/guardian?

9. When you view the academic performance data in Infinite Campus, what do you do with the information presented?

      a.   If you do not view the academic performance data in Infinite Campus, why not?

10. Does the academic information presented via the Parent Portal provide you with information regarding your child's academic <u>progress</u>?

      a.   If yes… Does the information presented therein prove insightful?

      b.   If no… why not?

11. After your view academic information presented on the portal, what do you next?

      a.   If the parent does not use Infinite Campus, skip this question.

12. As a parent, what is your perception of the Parent Portal as a communication vehicle between schools and homes?

13. Do you believe that the academic information presented via the Parent Portal has an impact on your child's academic success?

      a.   Please elaborate on your reply.

14. If I were to ask your son or daughter, "Do you believe the academic performance information presented via the Parent Portal places stress on you," how would they likely reply?

15. School to home communication and parent involvement in their children's academic lives have both proven to result in improved school related outcomes, for children. What role do you believe the Infinite Campus Parent Portal plays in facilitating involvement for parents/guardians in the academic lives of their children?

Closing

Thank you for taking time out of your day/evening to share your perceptions of the Infinite Campus Parent Portal as a communication vehicle. Your feedback will certainly help support my research study and will serve to advance our collective understanding of the communication features provided within the Infinite Campus Data Management system.

APPENDIX F: INTERVIEW PROTOCOL (ADMINISTRATOR)

Interview Protocol

Opening:

Thank you for taking the time to participate in this interview concerning administrator's perceptions related to the Infinite Campus Parent Portal. Your participation in this interview supports my research study on parent/guardian, teacher, and administrator perceptions related to the Infinite Campus Parent Portal. The purpose of this study is to gain greater insights into parent/guardian, teacher, and administrators' perceptions of Infinite Campus, specifically the Parent Portal, and the role it plays as a communication vehicle between schools and residences. Your participation in this study will provide valuable information related to school to home communication, use of Infinite Campus, and the extent to which we (as a high school) satisfy, or fail to satisfy, communication needs of parents at the secondary level.

Overview

During this interview I will ask approximately 15 questions. The entire interview will be captured in an audio recording to allow for an accurate accounting of our conversation. The only people who will know what is said are you and I. The discussion and transcripts from this interview will be kept entirely confidential. When the results of the interview are shared, your name will not be included. Do you have any questions before we begin?

Interview Questions

1. Can you please tell me about your professional background working in the field of public education?

2. In your opinion, what is the role of communication between schools and residences, at the high school level?

3. As an administrator, what communication vehicles do you use to keep parents/guardians informed of school related matters?

    a. *School related matters includes events, activities, and academically relevant information, e.g. grades, attendance patterns, etc.*

4. As an administrator, what do you believe is the primary vehicle used, by teachers, to communicate academic information to parents/guardians & students?

    a. *What are other methods employed by teachers to communicate academic information to parents/guardians & students?*

    b. *In your opinion, which is the timeliest?*

    c. *In your opinion, which commands the greatest response?*

    d. *What do such responses look like?*

5. What role does the Infinite Campus Parent Portal play in transmitting academic progress information to parents/guardians & students?

6. What type of training is provided to teachers when they join this staff related to the use of Infinite Campus?

7. What type of expectations are placed on teachers related to entering information into Infinite Campus?

8. What type of support is given to teachers as it relates to daily and/or quarterly inputting of grades?

9. Do you believe that the information presented in the Infinite Campus Parent Portal provides parents/guardians & students with insights into a student's academic progress?

    a. *Is the information presented therein useful to parents/guardians?*

10. What type of support/ training is provided to parents/guardians regarding the use of the Infinite Campus Parent Portal?

11. Does the academic information presented via the Infinite Campus Parent Portal inspire reactions on behalf of the students/parent e.g.: *what does the information presented therein inspire parents/guardians and/or students to do.… (If anything)?*

12. Do you believe that the academic information presented via the Infinite Campus Parent Portal places stress on the students in this high school?

13. How would you describe students at this school related to their academic goal orientation?

    a. *e.g. the extent to which your students focus on outcome feedback (grades)?*

14. If I had the opportunity to speak with a student at this high school regarding the Infinite Campus Parent Portal, specifically about viewing grades on Infinite Campus, what do you think their opinion would be?

15. School to home communication and parent involvement in their children's academic lives have both proven to result in improved school related outcomes, for children. What role do you believe the Infinite Campus Parent Portal plays in facilitating involvement for parents/guardians in the academic lives of their children?

Closing

Thank you for taking time out of your day/evening to share your perceptions of the Infinite Campus Parent Portal as a communication vehicle. Your feedback will certainly help support my research study and will serve to advance our collective understanding of the communication features provided within the Infinite Campus Data Management system.

APPENDIX G: FOCUS GROUP INTERVIEW PROTOCOL (TEACHER)

Interview Protocol

Opening:

Thank you for taking the time to participate in this focus group concerning teacher perceptions related to the Infinite Campus Parent Portal. Your participation in this interview supports my research study on parent/guardian, teacher, and administrator perceptions related to the Infinite Campus Parent Portal. The purpose of this study is to gain greater insights into parent/guardian, teacher, and administrators' perceptions of Infinite Campus, specifically the Parent Portal, and the role it plays as a communication vehicle between schools and residences. Your participation in this study will provide valuable information related to school to home communication, use of Infinite Campus, and the extent to which we (as a high school) satisfy, or fail to satisfy, communication needs of parents at the secondary level.

Overview

During this focus group I will ask approximately 13 questions. The entire focus group will be captured in an audio recording to allow for an accurate accounting of our conversation. The only people who will know what is said are myself and those participating in this focus group. The discussion and transcripts from this interview will be kept entirely confidential. When the results of the interview are shared, your name will not be included. Do you have any questions before we begin?

Focus Group Interview Questions

1. As teachers, what communication vehicles do you use to keep parents/guardians informed of school related matters?

   a. *School related matters includes events, activities, and academically relevant information, e.g. grades, attendance patterns, etc.*

2. As teachers, what do you believe is the primary vehicle used, by teachers, to communicate academic information to parents/guardians & students?

   a. *What are other methods employed by teachers to communicate academic information to parents/guardians & students?*

   b. *In your opinion, which is the timeliest?*

   c. *In your opinion, which commands the greatest response?*

   d. *What do such responses look like, please provide examples?*

3. In your opinion, how essential is communication between schools and residences, at the high school level?

   a. *What are some of the challenges?*

4. What do you use Infinite Campus for?

5. How do you feel about Infinite Campus?

6. What role does the Infinite Campus Parent Portal play in transmitting academic progress information to parents/guardians & students?

7. Please explain how you were taught to use Infinite Campus.

8. What expectations must you adhere to related to grade entry, daily, quarterly, yearly?

    a. *What type of supports are in place as you enter such information into Infinite Campus?*

9. Does the academic information presented via the Infinite Campus Parent Portal inspire reactions on behalf of the students/parent?

    a. *e.g.: what does the information presented therein inspire parents/guardians and/or students to do… (If anything)?*

10. Do you believe that the academic information presented via the Infinite Campus Parent Portal places stress on the students in this high school? Please elaborate on your reply.

11. How would you describe students at this school related to their academic goal orientation, e.g. the extent to which your students focus on outcome feedback (grades)?

12. If I had the opportunity to speak with a student at this high school regarding the Infinite Campus Parent Portal, specifically about viewing grades on Infinite Campus, what do you think their opinion would be?

13. (Optional) if previously addressed: School to home communication and parent involvement in their children's academic lives have both proven to result in improved school related outcomes, for children. What role do you believe the Infinite Campus Parent Portal plays in facilitating involvement for parents/guardians in the academic lives of their children?

Closing

Thank you for taking time out of your day/evening to share your perceptions of the Infinite Campus Parent Portal as a communication vehicle. Your feedback will certainly help support my research study and will serve to advance our collective understanding of the communication features provided within the Infinite Campus Data Management system.

APPENDIX H: DOCUMENT ANALYSIS PROTOCOL

Documents Analysis Protocols will include the following- *adapted from O'Leary (2014).*

1. Gather relevant texts.
   a. These text could include but will not be limited to, images/ "screen shots" of the Infinite Campus Parent Portal; images/ "screen shots" of Infinite Campus grade entry screens; images/ "screen shots" of messages shared with parents/guardians regarding missing/late/incomplete assignments; images "screen shots" of marking period comments provided to parents/guardians quarterly; other
   b. Grade entry guidelines
2. Establish organization and management plan.
   a. Utilize Dedoose to store data for review.
3. Printed copies will be annotated and maintained by the researcher.
4. Review documents and confirm authenticity.
5. Assess bias.
6. "Interview" the documents (O'Leary 2014)
   a. Who produced?
   b. Why was the document produced?
   c. For whom was the document produced?
7. Code content
   a. Use multiple rounds of coding: Attribute coding; Pattern coding; Code weaving

Parent/Guardian Research Study Participants

Who is Eligible?

If you are the parent/guardian of a student attending XXXXXX High School, you are eligible and invited to participate in this this qualitative case study.

Description of the Study:

The purpose of this case study is to explore the landscape, usage, and perceptions of parents/guardians, teachers, and administrators related to the Infinite Campus Data Management System, specifically the Parent Portal. Your participation would provide critical information related to the **parent/guardian** experiences, perceptions, and usage of the Infinite Campus Parent Portal. The information gained from this study will provide schools an opportunity to improve or revise practices, further develop training opportunities, and may influence adjustments and/or enhancements related to present practices.

Participant Expectations:

Participating parents/guardians would be contacted directly by the researcher and an individual interview would be arranged for a mutually convenient time. The interview would be conducted via ZOOM and would last for approximately 30 minutes.

Interested?

If you are interested in participating in this study:

- Please email Michael Larson at michael.larson17@my.stjohns.edu or…
- Call Michael Larson at XXX-XXX-XXXX

*Please know that further information related to the confidentiality of study participants will be provided. No identifiable information will be presented/provided in the findings of this study.

Thank you!

Thank you in advance for your consideration of this request. This study is designed to gain essential information from key stakeholder groups. Your participation would play an essential role in filling a void in the present scholarship related to role the Infinite Campus Parent Portal plays as a communication vehicle.

APPENDIX J: TEACHER RECRUITMENT FLYER

ST. JOHN'S UNIVERSITY
THE SCHOOL OF EDUCATION

Teacher Focus Group Research Study Participants Needed

Who is Eligible?

If you are the a XXXXXX High School Teacher responsible for teaching students enrolled in Grade 9 or Grade 11 math, science, social studies or English Classes, you are eligible and invited to participate in this qualitative case study.

Description of the Study:

The purpose of this case study is to explore the landscape, usage, and perceptions of parents/guardians, teachers, and administrators related to the Infinite Campus Data Management System. Your participation would provide critical information related to **teacher** perceptions and usage of the Infinite Campus Data Management System. The information gained from this study will provide schools an opportunity to improve or revise practices, further develop training opportunities, and may influence adjustments and/or enhancements related to present practices.

Participant Expectations:

Participating teachers would be contacted directly by the researcher and a focus group interview would be arranged for a mutually convenient time. The focus group interview would be conducted in-person, following all school enumerated procedures related to social distancing.

Interested?

If you are interested in participating in this study:

- Please email Michael Larson at michael.larson17@my.stjohns.edu or…
- Call Michael Larson at XXX-XXX-XXXX

*Please know that further information related to the confidentiality of study participants will be provided. No identifiable information will be presented/provided in the findings of this study.

Thank you!

Thank you in advance for your consideration of this request. This study is designed to gain essential information from key stakeholder groups. Your participation would play an essential role in filling a void in the present scholarship related to role the Infinite Campus Parent Portal plays as a communication vehicle.

REFERENCES

Adler, R.B., & Rodman, G. (1994). *Understanding human communication.* Harcourt Brace College Publishers.

Allen, J. D. (2005). Grades as valid measures of academic achievement of classroom Learning. *The Clearing House*, *78*(5), 218-223.

Ames, C. (1993, March). Parent involvement: The relationship between school to home communication and parents' perceptions and beliefs (Report No. 15). https://eric.ed.gov/?id=ED362271

Anderson, K. J., & Minke, K. M. (2007). Parent involvement in education: Toward an understanding of parents' decision making. *The Journal of Educational Research*, *100*(5), 311-323. https://doi.org/10.3200/JOER.100.5.311-323

Aronson, M. M. (1995). Building communication partnerships with parents. *Teacher Created Materials, Inc*.

Asif, M., & Krogstie, J. (2011). Mobile student information system. *Campus - Wide Information Systems, 28*(1), 5-15.

Bailey, J., and J. McTighe. 1996. Reporting achievement at the secondary level: What and how. In T.R. Guskey (ed.), *Communicating student learning. 1996 Yearbook of the Association for Supervision and Curriculum Development* (pp. 119-140). ASCD.

Baker, T. L., Wise, J., Kelley, G., & Skiba, R. J. (2016). Identifying barriers: Creating solutions to improve family engagement. *School Community Journal, 26*(2), 161-184.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change.

Psychological Review, 84, 191-215.

Barnyak, N.C., & McNelly, T. A. (2009). An urban school district's parent involvement:

    A study of teachers' and administrators' beliefs and practices. *School Community*

    Journal, 19(1), 33-58.

Beale, A. V. (1985). Toward more effective parent involvement. *The Clearing House*,

    58(5), 213-215.

Bemak, F., & Cornely, L. (2002). The SAFI model as a critical link between marginalized

    families and schools: A literature review and strategies for school counselors.

    Journal of Counseling & Development, 80(3), 322.

Benson, C. S. (1984) Economics of home school relationships. *Phi Delta Kappan, 65*(6),

    401-404.

Berg, D. N. (1978). Intergroup relations: an abbreviated update. *Exchange*, *3*(4), 48-51.

Berg, B. (2017). *Qualitative research methods for the social sciences (9ᵗʰ ed.)*. Pearson.

Berger, E.H. (1991). *Parents as partners in education: The school and home working*

    together. MacMillan.

Berger, E. H. (2000). *Parents as partners in education: Families and schools working*

    together (5ᵗʰ ed.). Merrill.

Bergman, P. (2012). Parent-child information frictions and human capital investment:

    Evidence from a field expert. https://doi.org/10.1086/711410

Berliner, D. (2011). Rational response to high- stakes testing; the case of curriculum

    narrowing and the harm that follows. *Cambridge Journal of Education*, *41*(3),

    287- 302.

Bernstein, A. (1998). Using electronic mail to improve school-based communications.

T.H.E. Journal, 25(10), 58-60.

Best k-12 student information systems. (2020). https://www.g2.com/categories/k-12-student-information-systems

Bird, K. (2006). How do you spell parental involvement? SIS. *T H E Journal*, *33*(7), 38-42.

Brandt, R. (1998). Listen first. *Educational Leadership, 55*(8), 25-30.

Broderick, P.C., & Mastrilli, T. (1997). Attitudes, concerning parent involvement: Parent and Teacher Perspectives. *Pennsylvania Educational Leadership, 16.* 30-36.

Brophy, J.E. (1983). Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology, 75(*5), 631- 661.

Brown, P. C. (1989). Involving parents in education of their children*.*

https://eric.ed.gov/?q=involving+parents+in+education+of+their+children&id=ED308988

Bulach, C., Lunenburg, F. C., & Potter, L. (2008). *Creating a culture for high performing schools: A comprehensive approach to school reform.* Rowman & Littlefield.

Elementary and Early Child Education, Urbana, IL: Clearinghouse. (ED308988). Cameron, C.A., & Lee, K. (1997). Bridging the gap between home and school with voicemail technology. *Journal of Educational Research, 90*(3), 182-191.

Caspe, M.S. (2003). How teachers come to understand families. *The School Community Journal, 13*(1), 115-131.

Cattermole, J., & Robinson, N. (1985). Effective home / school communication: From the parents' perspective. *The Phi Delta Kappan*, *67*(1), 48-50.

Chadwick, K.G. (2004). *Improving schools through community engagement: A practical guide for educators.* Corwin Press.

Chambers, L. (1998). How customer-friendly is your school? *Educational Leadership, 56* (2), 33-35.

Child Trends. (2013). Parental involvement in schools.

http://www.childtrends.org/?indicators=parental-involvement-in-schools

Colombo, M.W. (2004). Family literacy nights…and other home-school connections. *Educational Leadership, 61*(8), 48-51.

Convert Audio & Video to Text (2020). Rev. http://www.rev.com

Creswell, J.W. (2007). *Qualitative inquiry and research design: Choosing among five approaches (2nd ed.).* Sage Publications.

Creswell, J. (2013). *Qualitative inquiry and research design: Choosing among five approaches.* Sage Publications.

Darby, R., & Hughes, T. (2005). The evolution of student information systems. *THE Journal*. https://thejournal.com/Articles/2005/10/01/The-Evolution-of-Student-Information-Systems.aspx

Darling, S. & Westberg, L. (2004). Parent involvement in children's acquisition of reading. *The Reading Teacher, 57(8)*, 774-776.

*Dedoose Version **8.0.35**, web application for managing, analyzing, and presenting qualitative and mixed method research data.* (2018)**.** Dedoose. https://www.dedoose.com/

DePlanty, J., Coulter-Kern, R., & Duchane, K. A. (2007). Perceptions of parent involvement in academic achievement. *The Journal of Educational Research*, *100*(6), 361-368.

Desforges, C. & Abouchaar, A. (2003). The impact of parental involvement, parental

    support and family education on pupil achievement and adjustment: A literature

    review (research Report RR 433) Department for Education and Skills.

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

    level schooling. *The Journal of Educational Research, 98*(3), 164-175.

Deutsch, M. (1973). Group formation. In M. Deutsch (Author), *Constructive and*

    destructive processes (pp. 48-66). Yale University Press.

Dwyer, D. J., & Hecht, J. B. (1992). Causes underlying minimal parent

    involvement in the education of their children. *School Community Journal*,

    2(2), 1-19.

Ellis, A. (2008). *Teacher's perceptions on the impact of student academic achievement*

    and parental involvement through PowerSchool program in a Catholic School

    Diocese. A dissertation presented at Seton Hall University.

Ellis, R.K. (2009). Field guide to learning management, *ASTD Learning Circuits.*

Epstein, J. L. (1986). Parents' reactions to teacher practices of parent involvement. *The*

    Elementary School Journal, *86*(3), 277-294.

Epstein, J. L, (1987). Toward a theory of family-school connections: Teacher practices

    and Parent involvement. In K. Hurrelman, F. Kaufmann, & F. Losel (eds.), Social

    intervention: Potential and constraints (pp. 121-136).

Epstein, J.L., (1995). School/family/community partnerships: Caring for the children we

    share. *Phi Delta Kappan, 76,* 701- 712.

Epstein, J. L. (2001). Building bridges of home, school, and community: The importance

    of design. *Journal of Education for Students Placed at Risk, 6*(1), 161-168.

Epstein, J.L., Sanders, M.G., Simon, B.S., Salinas, K.C., Jansorn, N.R., & Van Voorhis, F.L. (2002). *School, family, and community partnerships: Your handbook for action* (2nd ed.). Corwin.

Epstein, J. L. (2004, August). Meeting NCLB requirements for family involvement. *Continental Press*, *8*(1), 14-17.

Epstein, J. L., & Salinas, K. C. (2004). Partnering with families and communities. *Educational Leadership*, *61*(8), 12-18.

Epstein, J.L. (2008). Improving family and community involvement in secondary schools. *Education Digest, 73*(6), 9-12.

Epstein, J. L., & Van Voorhis, F., L. (2010). School counselors' roles in developing partnerships with families and communities for student success. *Professional School Counseling, 14*(1), 1-14. https://doi.org/10.1177/2156759X1001400102

Epstein, J.L., (2011). *School/family/community partnerships (2nd ed.).* Westview Press.

Every student succeeds act (ESSA). U.S. Department of Education. https://www.ed.gov/essa?src=rn

Fan, X., & Chen, M. (2001) Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1-22.

Feuerstein, A. (2000). School characteristics and parent involvement: Influences on participation in children's school. *The Journal of Educational Research, 94*(1), 29-39.

Finders, M., Lewis, C. (1994). Why some parents don't come to school. *Educational Leadership, 51*(8), 50-54.

Flynn, G., & Nolan, B. (2008). What do school principals think about current school-

family relationships? *NASSP, 92*(3), 173-190.

Galindo, C.L., & Sheldon, S.B. (2012). Examining the effects of school and

home connections on children's kindergarten cognitive growth. *Early Childhood*

Research Quarterly, 27, 90 103.

Geddes, D. (2009). How am I doing? Exploring on-line grade book monitoring as a self-

regulated learning practice that impacts academic achievement. *Academy of*

Management Learning & Education, *8*(4), 494-510.

Geddes, D. (2010, October). Online grade books: Facilitating student self-monitoring

tendencies and academic performance. *Decision Line*, *41*(5), 13-22.

Glasgow, N.A., & Whitney, P.J. (2009). Parents and politics of homework: Some

historical perspectives. *Teacher College Record, 105*, 846-871.

Goldschmidt K. (2020). The COVID-19 Pandemic: Technology use to support the

wellbeing of children. *Journal of pediatric nursing, 53,* 88-90.

https://doi.org/10.1016/j.pedn.2020.04.013

Gonzalez-DeHass, A.R., Willems, P.P. & Holbein, M.F.D. Examining the Relationship

Between Parental Involvement and Student Motivation. *Educ Psychol Rev* 17**,** 99–

123 (2005). https://doi.org/10.1007/s10648-005-3949-7

Goodall, J., & Montgomery, C. (2013). Parental involvement to parental engagement: A

continuum. *Educational Review, 66*, 1-12.

Goodall, J.S. (2016). Technology and school-home communication. *International Journal*

of Pedagogies & Learning, *11*(2), 118-131.

Gortner, H. F., Nichols, K. L., Ball, C. (2007). *Organization theory* (3rd ed.)

Wadsworth/Cengage Learning.

Graham-Clay, S. (2005). Communicating with parents: Strategies for teachers. *School Community Journal, 15*(1), 117-129.

Grant, L. (2011). "I'm a completely different person t home": Using digital technologies to connect learning between home and school. *Journal of Computer Assisted Learning, 27*(4), 292-302.

Greenwood, G.E., & Hickman, C. W. (1991). Research and practice in parent involvement: Implications for teacher education. *The Elementary School Journal, 19*(3): 281-287.

Greitz Miller, R., Brady, J. T., & Izumi, J. T. (2016). Stripping the wizard's curtain: Examining the practice of online grade booking in k-12 schools. *School Community Journal*, *26*(2), 45-69.

Gross, D., Bettencourt, A. F., Taylor, K., Lucine, F., Bower, K., & Singleton, D. L. (2020). What is Parent Engagement in early learning? Depends who you ask. *Journal of Child and Family Studies, 29*(3), 747-760. http://dx.doi.org.jerome.stjohns.edu:81/10.1007/s10826-019-01680-6

Guernsey, L., Ishmael K., Prescott S. Online learning in the wake of COVID-19 tips and resources for PreK-12 with equity in mind, New America. 2020. https://www.newamerica.org/education-policy/edcentral/online-learning-wake-covid-19/

Harris, A., & Goodall, J. (2008). Do parents know they matter? Engaging all parents in learning. *Educational Researcher*, 50(3), 277-289.

Hart, T.E. (1988). Involving parents in the education of their children. *OSSC Bulletin, 32*(3)

Heise, M. (2017). From no child left behind to every student succeeds: Back to a future

    for education federalism. *Columbia Law Review, 117*(7), 1859-1896.

Henderson, A. T., & Berla, N. (1994). A new generation of evidence: The family is

    critical to student achievement.

Henderson, A. T., & Mapp, K.L. (2002). A new wave of evidence: The impact of school

    family, and community connections on student achievement. *Southwestern*

    Educational development Laboratory. https://eric.ed.gov/?id=ED474521

Henderson, A., Jacob, B., Kernan-Schloss, A., & Raimondo, B. (2004). *The case for*

    parent leadership. Lexington, KY: Prichard Committee for Academic Excellence.

Holliday, A.E. (1986). Home-high school communication and collaboration are plus

    factors. *Journal of Educational Public Relations, 8*(4) 4-7.

Hoover-Dempsey, K.V., Walker, J. M., Sandler, H. M., Whetsel, D., C. L., Wilkins, A.S.,

    & Closson, K. (2005). Why do parents become involved? Research findings and

    implications. *Elementary School Journal, 106*(2), 105-130

Hoover-Dempsey, K.V., Walker, J.M., K.P., & Reed, R. P. (2002). Teachers involving

    parents (TIP): An in-service education program for enhancing parent

    involvement. *Teaching and Teacher Education, 18*(7), 843-867

Hoover-Dempsey, K.V., & Sandler, H.M. (1995). Parental involvement in children's

    education: Why does it make a difference? *Teachers College Record, 95*, 310

    331.

Hoover-Dempsey, K. V., & Sandler, H. M. (1997). Why do parents become involved in

    their children's education? *Review of Educational Research*, *67*(1), 3-42.

    https://doi-org.jerome.stjohns.edu/10.2307/1170618

Ho, L.-H., Hung, C.-L., & Chen, H.-C (2013) Using theoretical models to examine the

    acceptance behavior of mobile phone messaging to enhance parent-teacher

    interactions. *Computers & Education, 61,* 105-114.

Jackson, A. (2011). One advantage: Social class and parental involvement in elementary

    education. *Child Development, 42,* 134-135.

Jefferson- Jenkins, C., & Hawkins Hill, M. (2011, June 22). *Role of federal government*

    in public education: Historical perspectives. League of Women Voters.

    http://lwv.org/role-federal-government-publiceducation-historical-perspectives

Jeynes, W.H (2007). The relationship between parental involvement and urban secondary

    school student academic achievement: A meta-analysis. *Urban Education (42)*(1),

    82-110.

Jones, L. (2009). The Implications of NCLB and a Nation at Risk for K-12 Schools and

    Higher Education. *International Journal of Educational Leadership*

    Preparation, *4*(1).

Juedes, D.W. (2003). Experiences in web-based grading. *Proceedings of ASEE/IEEE*

    Frontiers in Education Conference, 27-32.

Juedes, D. W. (2005). Web-based grading: Further experiences and student attitudes.

    Proceedings of ASEE/IEEE Frontiers in Education Conference, 18-23.

Koch, C. (2010). *The function of electronic communication devices in assisting parental*

    involvement in middle school. A Dissertation Submitted to The University of

    South Dakota May 2010.

Kraft, M.A., & Dougherty, S. M. (2013) The effect of teacher-family communication on

    student engagement: Evidence from randomized field experiment. *Journal of*

    Research on Educational Effectiveness, 6(3), 199-222.

Kruger, R. A. (1994). *Focus groups: A practical guide for applied research* (2nd ed.).

    Sage Publications.

Lacina, J. (2006). Virtual record keeping: Should teachers keep online grade books.

    Childhood Education, *82*(4), 252-254.

Lahey, J. (2013, September 6). I will not check my son's grades online five time a day.

    The Atlantic, 1-7. https://www.theatlantic.com

Lahey, J. (2017, August 22). The downside of checking kids' grades constantly. *New York*

    Times. http://www.nytimes.com

Laho, N. S. (2019). Enhancing school–home communication through learning

    management system adoption: Parent and teacher perceptions and

    practices. *School Community Journal, 29*(1), 117-142.

Lawrence-Lightfoot, S. (2004). Building bridges from school to home. *Instructor, 114*

    (1), 24-28.

Lazar, A., Broderick, P., Mastrilli, T., & Slostad, F. (1999). Educating teachers for parent

    involvement. *Contemporary Education, 70*(3), 5.

Lunenburg, F. C. (2011). Systems thinking and the learning organization.

      Schooling, *2*(1), 1-5.

Marshall, C., & Rossman, G. B. (2016). *Designing qualitative research* (Sixth ed.). Sage

    Publications.

McDermott, P.C., & Rothenberg, J.J. (2001). *New teachers communicating effectively with low-income urban parents.* Paper presented at the annual meeting of the American Educational Research Association.

McIntire, T. (2004). Student information systems demystified. *Technology & Learning*, *24*(10), 9-10.

McKenna, L. (2016). Why online grade books are changing education. *The Atlantic*. https://www.theatlantic.com/education/archive/2016/03/how-online-gradebooks-are-changing-education/473175/

McNamara, C. (1999). General guidelines for conducting interviews, authenticity consulting, LLC,. https://managementhelp.org/businessresearch/interviews.htm

Migliorino, N. J., & Maiden, J. (2004). Educator attitudes toward electronic grading software. *Journal of Research on Technology in Education*, *36*(3), 193-212.

Moore, K.L. (2015). Identifying effective communication practices for eliciting parental involvement at two K-8 schools (PhD thesis). Walden University.

Moving Learning Forward. (2020). PowerSchool Powering Brighter Futures. http://www.powerschool.com

Nye, C., Turner, H.M., & Schwartz, J.B. (2006) *Approaches to parental involvement for improving the academic performance of elementary school children in grade K-6.* The Campbell Collaboration. https://www.campbellcollaboration.org/

O'Leary, Z. (2014). The essential guide to doing your research project (2nd ed.). Sage Publications.

Olmstead, C. (2013). Using technology to increase parent involvement in schools. *TechTrends*, *57*(6), 28-37. http://dx.doi.org.jerome.stjohns.edu:81/10.1007/s11528-013-0699-0

Osborne, B. (1965). The Elementary and Secondary Education Act of 1965. *The Clearing House*, *40*(3), 190-192.

Ozdamli, F., & Yildiz, P. (2017). Opinions and Expectations of Parents on Integration of Mobile Technologies to Education and School Family Cooperation. *International Journal Of Interactive Mobile Technologies (IJIM), 11*(4), pp. 136-148. http://dx.doi.org/10.3991/ijim.v11i4.6791

Patrikakou, E., (2015) Relationships among parents, students, and teachers: The technology wild card. *Procedia- Social and Behavioral Science 174,* 2253-2258.

Raizen, S. A. (1997). Making Way for Technology Education. *Journal of Science Education and Technology*, *6*(1), 59-70.

Reed, K. (2008) The relationship between achievement and parental involvement. *Journal of Adolescence, 17*(2), 9.

Rogers, R.R.H. & Wright, VH. (2008). Assessing technology's role in communication between parents and middle school. *Electronic Journal for Integration of Technology Education*, Vol. 27 p. 36-58.

Saldaña, J. (2013). *The coding manual for qualitative researchers.* SAGE Publications.

Scharton, H. (2019). The importance of parental involvement for student success. http://www.pta.org.

Schrand, T. (2008). Online grade books: Surprising accomplishments. *Teaching Professor, 22*(4), 6.

Seldow, A. L. (2010). On-demand grades: The effect of online grade book access on student mastery and performance goal orientations, grade orientation, academic self-efficacy, and grades.

Senge, P.M. (1994). *The Fifth discipline fieldbook: Strategies and tools for building a learning organization*. Currency, Doubleday.

Senge, P. (2006). *The Fifth discipline: The art and practice of the learning organization.* Currency, Doubleday.

Senge, P. (2011). *Schools that learn: A fifth discipline fieldbook for educators, parents, and everyone who cares about education.* Doubleday

Sheldon, S. B. (2005). Testing a structural equation model of partnership program: Implementation and parent involvement. *Elementary School Journal, 106*(2), 171-187

Sheldon, S.B., Epstein, J. L., & Galindo, C.L. (2010). Not just numbers: Creating a partnership climate to improve math proficiency in schools. *Leadership and Policy in Schools, 9,* 27-48.

Skinner, R. R., & Library of Congress, C. R. S. (CRS). (2019). The Elementary and Secondary Education Act (ESEA), as Amended by Every Student Succeeds Act (ESSA): A Primer. CRS Report R45977, Version 2. In *Congressional Research Service*. Congressional Research Service.

Spera, C. (2005). A review of the relationship among parenting practices, parenting styles, and adolescent school achievement. *Educational Psychology Review, 17,* 125-146.

Stake, R.E. (1995). *The art of case study research.* Sage Publications.

Sui-Chu, E. H., & Willems, J. D. (1996). Effects of parental involvement on eighth-grade achievement. *Sociology of Education*, *69*(2), 126-141. https://doi.org/10.2307/2112802

Taffel, R. (2001). *Getting through to difficult kids and parents.* The Guilford

Press.

The National Defense Education Act: Ten years of progress. (1968). *Educational*

Researcher, *19*(8), 1-3.

Transforming K12 Education. (2020). Infinite Campus.

https://www.infinitecampus.com/company

Tucker, B. (2010, March). *Five design principles for smarter data systems.* Education

Sector. https://www.air.org/edsector-archives/publications/five-design-

principlessmarter-data-systems

Turner, D.W. (2010). Qualitative Interview Design: A practical guide for novice

investigators. *The Qualitative Report, 15(3)*, 754-760. https://nsuworks.nova.edu

Tyson, S. D. (2020). *Exploring parent-teacher communication through technology: A*

case study.

U.S. Department of Education, Office of the Secretary, Office of Public Affairs, *No Child*

Left Behind: A Parent's Guide, 2003.

U.S. Department of Education, Office of State Support, *Fundamental Change: Innovation*

in America's Schools Under Race to the Top, Washington D.C., 2015

U.S. Department of Education. (2015). Every Student Succeeds Act (ESSA). United

States Department of Education.

Van Voorhis, F. L. (2003). Interactive homework in middle school: Effects on family

involvement and science achievement. *The Journal of Educational Research*,

96(6), 323-338.

Villeneuve, J., Conner, J., Selby, S., & Pope, D. (2019). Easing the stress at pressure-cooker

    schools. *The Phi Delta Kappan, 101*(3), 15-19.

    https://doi.org/10.1177/0031721719885910

Walberg, H. J. (1984). Families as Partners in Educational Productivity. *The Phi Delta*

    Kappan, *65*(6), 397-400.

Why Gradelink? (2020). Gradelink Student Information System.

    http://www.gradelink.com

Yin, R. K. (2001). *Qualitative research from start to finish*. Guilford Press.

Yin, R.K. (2009). *Case study research: Design and methods (4th ed.).* Sage Publications.

Yin, R. K. (2011). *Applications of case study research (3rd ed.).* Sage Publications.

Yin, R. (2018). *Case study research and applications: design and methods (6th ed.).*

    Sage Publications.

Zhao, Y. (2012). *World class learners: Educating creative and entrepreneurial students*.

    Corwin.

VITA

Name	Michael K. Larson
Baccalaureate Degree	Bachelor of Science, Secondary Social Science Education, Plymouth University: Plymouth, New Hampshire Major: History
Date Graduated	May 2003
Master's Degree	Master of Special Education, Plymouth University: Plymouth, New Hampshire
Date Graduated	2006
Other Degrees and Certificates	Certificate of Advanced Studies in Educational Leadership (SBL/ SDL), State University of New York: Stony Brook University, Stony Brook, New York
Date Graduated	August 2014