EXPLORING PARENTS’ INFORMAL LEARNING OF SPECIAL EDUCATION: A MIXED METHODS STUDY

A Dissertation in

Adult Education

by

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ABSTRACT

Despite national regulatory and fiscal support for parent education, there is sparse research about how parents learn informally about special education policies, procedures, and processes, or about the relationship between parents’ informal learning and parents’ involvement in their children’s individualized education program (IEP). The intent of this study, utilizing a sequential exploratory mixed methods research design, was to address two key research questions: How do parents learn informally about special education?; What are the relationships between parent’s informal learning and parents’ involvement in their children’s educational program? The first phase interviews explored 10 parents’ learning and involvement perspectives from the Mid-Atlantic region of the United States. A second online survey phase yielded 122 parent responses and corroborated qualitative findings. Integrated findings analyzed through the theoretical and conceptual lenses of informal learning and social cognition, revealed three main themes that reflected parent learning and involvement at different stages: a) parents realized a need to learn after self-examination and reflection, formulated a path to learn having little to no knowledge, and experienced frustration and negative interactions with the school early in the process: b) parents navigated complex information in a nonlinear path, used online resources, written materials, and other sources primarily outside the education system; set aside time to learn, but often learned implicitly and incidentally about the educational program and the school teams’ skills and attitudes through social exchanges; and learned ways to adjust their approach to collaboration with the school team through self-reflection and perspective taking and: c) parents, through sharing, collaborating, and advocacy, served as sources of information, gained self-efficacy, moved the dynamics of the team, integrated new skills with prior knowledge and developed leadership and advocacy skills.
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CHAPTER ONE

Educating parents is front and center in special education national policy and practice. Significant human and fiscal resources have been expended to create substantial parent education efforts including national parent centers, national conference offerings, mandated state parent training initiatives, and online informational so that parents can learn about and become more involved in special education as an educational service for their children (Office of Special Education, 2013). Despite the ongoing national focus, regulatory support, and numerous learning options offered to parents, there is little research on how parents learn informally about special education policies, procedures, and processes as participants in and contributors to their children’s individualized education programs (IEP). This chapter introduces and provides the foundation for a mixed-method research study that explored the everyday learning of parents whose children were receiving public school special education services between the ages of 3 and 21 (IDEA, 2004) and the relationships between parents’ informal learning and their involvement in their children’s educational program. The purpose of this study was twofold: to explore the informal learning of parents whose children receive special education services and to investigate the relationship between informal learning and parent involvement.

**Historical Foundations of Special Education in the United States**

In 1965, Congress passed the first piece of legislation directly related to the education of students with disabilities: the Elementary and Secondary Education Act (ESEA). Subsequent legislation along with crucial court case decisions emphasized and affected equal access to education, and established high standards and accountability measures for schools (Bailey & Zirkel, 2015; Individuals with Disabilities Education Act [IDEA], 2004; The Education for All Handicapped Children Act, 1975; Vocational Rehabilitation Act, 1973). Parents vehemently
advocated for this legislation and, with the passage of these laws, policymakers mandated legal protections for children with disabilities enrolled in public schools. These mandates included the development and monitoring of students’ IEPs and the creation of IEP teams consisting of a group of educators who were to work jointly with students’ parents to implement the IEPs in the classroom (Abeson, 1981; ARC, 1954; Brodinsky, 1979). This led to a significant increase in the number of children with disabilities attending school. Consequently, the national focus shifted to funding issues and the significant staff shortages faced by districts (Hehir, 2008) due to the rapid increase in special education student enrollments.

The contemporaneous medical model that directly influenced educational diagnosis and programming rested on two underlying assumptions. First, it held that deviations from normative standards of behavior indicated an individual disorder (illness, disturbance, or dysfunction); and second, it held that behavior classified as deviant necessitated individual change facilitated through a therapeutic process (Reger, 1972). Adhering to this medical model erected significant educational programming barriers for children, as it was not a strength-based approach and assumed separate or exclusionary programming (Hehir, 2007).

The medical model also led to the labeling of disorders following a child’s diagnosis and stressed the remediation of physical, neurological, and biological disorders. Health professionals, primarily those specializing in mental health and who used the medical model, identified four classes of parents of special education children that fell along both the attitudinal-behavioral axis and a normative-contextual axis: neurotic, suffering, dysfunctional, or powerless (Ferguson, 2001). The medical model, therefore, contributed to health professional’s longstanding assumption that dysfunctional parents, typically mothers, caused their children’s disabilities (Ryan & Runswick-Cole, 2008). This assumption met with strong adverse emotional
reactions from parents (Neely-Barnes, Graff, Roberts, Hall, & Hankins, 2010) and led to the development of inadequate and problematic services that did not assist parents nor their children. Along with strong parent advocacy, over time special education as an educational entitlement service rejected the medical model and shifted to an educational model that focused on identifying student’s strengths, emphasizing parent involvement in programming decisions, and offering more inclusionary opportunities for children receiving special education services (Henderson, Marburger & Ooms, 1986).

However, the shift from the medical model to an educational model that included parents as contributors and decision makers in their children’s educational planning was not immediate, and parents often met with resistance from educators (Kalyanpur, Harry, & Skrtic, 2000; Nakawaga, 2000). Parent involvement and parent education studies from this period centered primarily on the amelioration of existing barriers to access and communication with education professionals (Harry, Allen, & McLaughlin, 1995; Leitch & Tangri, 1988). Collectively, the literature reflects that educators were ignoring parents’ concerns and exhibiting an overall lack of empathy. Parents reported perceived marginalization of their children by reports of teacher disinterest, low teacher to student communication expectations, and a lack of rich instructional design (Ashby, 2010; Gabel & Danforth, 2008; Neeley-Barnes et al., 2010; Zionts, Zionts, Harrison, & Bellinger, 2003).

Over time, with legislative support, the intent of the law (IDEA, 2004) and expected role of the parent as an IEP team member was that of a shared decision-maker. However, traditional general education and prevalent assumptions concerning parent involvement for all parents (with or without children receiving special education services) lingered, favoring a limited repertoire of normative parent practices and expectations, such as perfunctory or obligatory attendance at
school meetings, or contributing to school and parent group functions (Ishimarau, 2014). These pervasive views often underrated and interfered with parents’ roles as educational programming decision-makers and affected parents’ opportunities to question services or offer instructional insights (Lai, & Vadeboncoeur, 2012; Nakawaga, 2000). Educators viewed parents as either interfering and over-engaged, or as aloof and under-engaged. If parents were attentive and involved, yet questioned curricular or instructional practices, they were deemed intrusive and pushy. If parents were not involved based on these normative expectations, they were viewed as indifferent and not supportive of their child’s program. When parents could not comply with normative expectations, they were framed as ‘roadblocks’ in their child’s education and, consequently, parents, especially disadvantaged ones, were “…placed in a double bind” (Nakawaga, 2000, p. 443).

Parent involvement literature has also emphasized the national concern for the economic, structural, and cultural barriers that existed for parents from different socioeconomic groups (Ishimarau, 2014). Demographic studies have found a growing relationship between poverty and risk for disability (Fugiru & Yamaki, 2000; Kaye, LaPlante, Carlson, & Wenger, 1996; Seelman & Sweeney, 1995). Nearly 16% of all families with children (with or without disabilities) in the United States, lived in poverty in 1997, up from 11% in 1973 (Fugiru & Yamaki, 2000). The estimates of the number of children with a disability, aged 3-21 years, increased from 3.94 million in 1983 to 4.99 million in 1996. Disability prevalence across income levels during that same period (1983-1996) was relatively flat for children with disabilities at or above the poverty level; however, rates among children with disabilities below the poverty level increased dramatically after the mid-1980s from 7.8% to 11.1% in 1996, showing statistically significant rate increases (Fugiru & Yamaki, 2000). Poverty impacts school absenteeism and overall family
well-being (de La Luz Reynoso & Tidwell, 1996; Enwefa, Enwefa, & Jennings, 2016; Harry et al., 1995), including the family’s health, productivity, physical environment, emotional well-being, and family interactions. Additionally, poverty affects the quality of schools, including budgetary depletion, reduction of school resources, conditions of school buildings, unsafe environments, teacher shortages, and the number of teachers with qualifications to teach children with disabilities (Enwefa et al., 2016).

Cultural-linguistic barriers can affect homelife, family factors, and the health of the child, as well as parent involvement (Turnbull & Turnbull, 2015). Annually, the U. S. Department of Education’s Office of Special Education Programs (OSEP) reports aggregate data from each state. Of the 2014-2015 data collected, 13% of the eligible public school-aged population received special education services (USDOE, 2016). Of the total 13% eligible school-aged population, 15% were African-American, 17% were American Indian/Alaskan Native, 7% were Asian, 12% were Hispanic, 12% were Pacific Islander, 13% were White, and 13% were of two or more races (USDOE, 2016). African American and American Indian/Alaskan Native students were statistically more likely to meet the eligibility requirements to receive special education services than other racial/ethnic groups (Ostendorf, 2017). The percentages for African American and White students also rose slightly to 16% and 14%, respectively, with American Indian/Alaskan Native remaining at 17% (USDOE, 2016).

Collectively, socio-cultural, social-linguistic, and socio-economic barriers impact productive parent involvement and student achievement profoundly (Turnbull & Turnbull, 2015). Legislation has been in place for several decades to address advocacy for children with disabilities so that they receive a free and appropriate public education, but more work must be completed to address cultural, linguistic, and economic barriers. These barriers affect who
receives services, who does not, and how parents can support their children with disabilities. Parent concerns over special education labeling (by disability) and the lack of access to the general education curriculum continue (Hehir, 2008). A key focus area for improvement in special education is the need for inclusionary practices so that all children receive instruction with same-aged peers. Despite the evolving national special education policy, process, and procedures, the welcoming of parents as full team members, as shared-decision-makers and problem-solvers, learning about their child's education program side-by-side with educators remains elusive for many parents today (Hehir, 2008; IDEA, 1990, 1997, 2004; Turnbull & Turnbull, 2015). The next section will provide an overview of the parent involvement literature and will define parent involvement as it is used for this study.

Parent Involvement

To contextualize parent involvement in special education, it is necessary to first share definitions and description differences of parent involvement from a broader general educational scope. Typically, parent involvement research in the broader context of public education differs from research focused on the special education context as parent involvement research is primarily concerned with the effect of parent involvement on student educational outcomes and overall school outcomes (Epstein, 1986; Fan & Chen, 2001; Henderson & Mapp, 2002; Hoover-Dempsey et al., 2005; Jeynes, 2005, 2007; Swap, 1990). General education parent involvement literature differs from special education regarding parent motivation, forms, and different ways parents can become involved (Epstein, 2005). Additionally, parents are viewed by their characteristics and their risk factors for getting involved (Burke, 2012). Overall, for the broader education population, there is no one definition of parent involvement (Burke, 2012). The literature from general education does provide certain aspects of parent involvement that can
inform the description of parent involvement for this study, but, generally, does not serve to provide the specificity needed (Burke, 2012).

Special education literature typically uses the term ‘family-school partnerships’ (Summer et al., 2005) and defines the involvement of parents in the IEP process conceptually through family-school relationships. The partnership is defined by mutually supportive interactions or indicators between families and professionals that focus on meeting the needs of children receiving special education services and their families. These family-school partnership indicators include a sense of competence, commitment, equality, positive communication, respect, and trust (Blue-Banning, Summers, Frankland, Nelson, & Beagle, 2004). Special education family-school partnerships are also concerned with influencing individual student achievement. To ensure this happens, there are legal requirements in place that guide the IEP process, and the design and delivery of the educational program under IDEA (2004), such as following procedural safeguards and providing access to the general education curriculum. Due to barriers discussed previously, however, special education literature continues to represent parents’ motivations for IEP meetings as originating from concerns that their children will not receive a free and appropriate public education (Hehir, 2000), rather than arising from how parents have worked collaboratively together with their IEP teams to ensure their children receive the services that are needed. The framework of family-school partnerships (Blue-Banning et al., 2004) outlines important indicators that provide a way to define parent involvement regarding special education for this study by capturing and defining the role a parent plays as a partner in the special education process.

Therefore, I am defining parent involvement as the role the parent plays as a partner in the family-professional partnership. More specifically, the role the parent plays as a partner,
centering on the dimensions of communication, commitment, equality, skills, trust, and respect (Blue-Banning et al., 2004). This definition provides a way for addressing the primary special education activities of parents, and the personal learning endeavors and commitment parents make in their role as a parent involved in special education. With this definition in mind, there continues to be a need for research to understand parents’ views and insights into how parents come to know about special education, and how they learn about the complexities of special education regulations, their parental rights, and the potential educational interventions for their children. It is also not known how parents acquire, process, or reflect on the wide-ranging aspects of special education, nor how they become active members of their child’s education team. Also lacking is information about the parent as a problem-solver and decision-maker in the creation and implementation of their child’s program.

This study is not about the effectiveness of parent education or training methods or the effectiveness of imparting information to the parent, but, rather, it is about the action and paths parents take to learn about special education to help their children, and what relationship that has on parent involvement. However, it is necessary, first, to review the literature on parent education to better understand what parent educational practices in the field of special education inform this study. The next section will discuss the literature investigating existing parent education methods and training offered.

Parent Education

Parent education is a systematic presentation of information to parents aimed at supporting the parent's efforts and abilities to promote their children's development (Kaiser & Mahoney, 1999). Preventative in nature, parent education has the goal to prevent the future onset of issues that may result from misunderstandings (Hoard & Shepard, 2005). Parent
education can comprise offerings of parent training activities. However, parent education differs from parent training, in that parent training is designed to intervene with existing conditions, targeting specific populations and methods of service delivery (Hoard & Shepard, 2005). Both parent education and parent training are offered to promote parent involvement and to provide new information centered on specific education topics inherent to special education laws, regulations, and compliance with special education.

Several studies looking at parent involvement discussed parent education as either a component of the research or recommended parent education or training as an outcome of the study (de La Luz Reynoso & Tidwell, 1996; Hernandez, Harry, Newman, & Cameto, 2008; Lai & Vadeboncoeur, 2012; Nachshen & Minnes, 2005; Nowell & Salem, 2007; Rodriguez et al., 2014). Findings revealed that parents experience barriers to parent education and training, such as the lack of understanding of special education terminology and broader procedural aspects of special education, as well as physical, technological, and language barriers. These studies also indicated that multifaceted factors influence parents when making decisions about their involvement and the need for learning more about special education (Fishman & Nickerson, 2014). Research revealed that there are essential relationships that exist among parents’ initiative to become involved and their view on schools' efforts to facilitate their involvement. Rodriguez et al. (2014) found that the knowledge gained by parents about their child’s educational program affected their view of the school. Further, parents specifically reported that knowledge of laws, school procedures, and information about disabilities were of major importance. With this experience, parents obtained a better understanding of what schools should provide for their child, which influenced parents’ views of the school’s efforts to facilitate their involvement.
Parents from a wide range of diverse backgrounds have also expressed the importance of taking the initiative, in that they report a strong desire to seek answers, gain greater awareness, and make meaning of special education information (de La Luz Reynoso & Tidwell, 1996; Feizi et al., 2014; Hernandez et al., 2008). As parent education and training efforts continue to evolve, federally supported national parent education services focus on parent education through a variety of more formal and online training options (PACER, 2013). Education mandates continue to increase parent education efforts and to expand the parent role as shared decision makers in their child’s education programs (IDEA, 2004; The President’s Commission on Excellence in Special Education, 2002; USDOE, 1999, 2013). These regulations and national position statements address the importance of parent engagement and the shared decision-making process and emphasize parent training opportunities as a method to promote sustainable parent involvement. However, despite the significant regulatory support for parent education, federal and state-funded parent training resources, and vast parent training offerings, there is sparse literature revealing parent perspectives on how they benefit and learn informally.

Informal Learning and Parents

Coombs (1985) defined informal learning as a lifelong learning process since the individual obtains knowledge, skills, and attitudes, as well as insights from everyday experiences. These learning experiences could include learning from travel, work, or leisure activities, from others’ attitudes and perspectives, or by learning from everyday activities of searching, reading, or listening to the multitude of media resources. Informal learning is usually intentional learning that is not highly structured. It may include self-directed learning, networking, coaching, mentoring, and performance planning that includes opportunities to review learning needs (Marsick & Watkins, 2001). This type of learning is learner-centered and
triggered by the demands of the learners’ life, environment, or context. The learning is natural and nonlinear, with the learners' needs met wherever or whenever the needs arise within different contexts. It does not have externally imposed curricular requirements (Illeris, 2004), such as an instructor, a structured learning environment, education-related program features, nor materials used for a more formal learning experience (Livingstone, 2001). Intentionality and consciousness dimensions are also associated with informal learning (Schugurensky, 2000).

There is sparse literature on informal learning as it relates to parents of children with disabilities. One study looked at parents' literacy needs and how parents accessed, understood, evaluated, and used information daily (Walker, 2012). This study found an intricate pattern of information use and learning, occurring both consciously and unconsciously, through meeting formalized, or planned, and nonformalized, or unanticipated, information needs. Parents used books or other resources, provided by educators or through parent training centers, or accessed web pages and online links that would lead them to new information. They also sought out another parent or parents to discuss what they had experienced in similar encounters.

Like other adult learners, parents who reflect on their experiences can enable their continued growth and development (Marienau & Segal, 2006). Despite national and state parent training efforts with an intent to shift the parent role from the receiver of information to that of teacher and expert on their child and special education practices (Turnbull & Turnbull, 2015), there is scant research on how parents achieve those role changes. There is also a paucity of research on how parents are learning in their everyday experiences and whether this information has a relationship to their ongoing and increasing parent involvement.

From studies that look at parents and their experiences in special education, there is little information about what parents do when they encounter barriers (Hernandez et al., 2008; Lai &
Vadeboncoeur, 2013; Lalvani, 2012; Leiter & Wyngaarden-Krauss, 2004; Trainor, 2010; Zionts et al., 2003), and there is scant information provided on how parents learn informally to gain better insights and problem-solve in these situations. Studies have shown that, even when parents succeed in overcoming barriers and, for example, obtain a service for their child (de la Luz Reynoso & Tidwell, 1996; Harry et al., 1995), the feeling of success often gives way to disillusionment, as the parents’ efforts to maintain services waxes and wanes over time. Disillusionment impacts the trust between parents and educators and negatively affects future parent involvement. Along with these gaps in the literature regarding parent education and training, there are also gaps in the literature about how parents leverage online resources to learn about special education. How researchers examined this specific site of learning will be discussed next.

A Pew Research Center report (2002) presents a synthesis of several years of findings from research on the impact of the Internet on Americans. The surveys found that parents with children under 18 are more likely to have used the Internet than parents without a minor child in the home (non-parents). Parents are more likely than non-parents to say they like computers and technology and proclaim that technology tools give them more control over their lives. The parents used the Internet more frequently, but for shorter durations, spending less time online than their non-parent counterparts. Parents reported using the Internet for health needs and planning family activities, and indicated that it helped with the way they cared for their child. Similar findings have shown parents learned about health-related topics by using online resources (Na & Chia, 2007).

The American Community Survey (ACS) from 2016 reported that computers were in 89% of all households and that 81% used broadband Internet subscriptions; but, non-
metropolitan areas continue to lag behind metropolitan areas in computer use and broadband subscriptions. Smartphones were the primary mode of Internet access in 76% of all households surveyed and were prevalent in households headed by younger people of lower income (under $25,000). The Internet seems to be, for a particular subsection of parents, an increasingly popular "first port of call" (Walker, 2012, p. 528) for less essential parent questions, and then, it often becomes the de facto source. Furthermore, even though national parent centers rely heavily on providing support to target special education populations, they primarily use online parent learning sites, offer routine advertisements of blogs, and encourage use of social media as a way for parents to learn more about special education (PACER, 2013). However, there are currently no known empirical studies that have determined the usefulness of these approaches.

One conceptual article (Santelli, Turnbull, Marquis & Lerner, 1997) discussed parent-to-parent programs and how dialogue provided an informal learning opportunity. Having the opportunity to receive the emotional and informational support from another parent who is experiencing similar circumstances was of primary concern for the parent. Parents reported the parent-to-parent opportunities to engage offered a way to identify the next steps to resolve their particular issue or matter. Overall, however, there is little informal learning research concerning parents of children who receive special education services. There remain significant gaps in the literature on parents’ informal learning, and no known studies were looking at the relationship between parents’ informal learning and parent involvement in special education.

Problem Statement

There has been significant messaging for greater parent involvement and increased parent education for nearly 40 years in the field of special education (Hehir, 2008; Trainor, 2010; Turnbull et al., 2015). Today, parents are expected to play a more participatory role in their
child's education as problem solvers and decision makers (Nakawaga, 2000); however, they continue to experience significant barriers and challenges to learning (Feizi et al., 2014) about special education. Studies also reveal that often parents who overcome obstacles and have a strong motivation to continue to be active participants, express disillusionment over time as education teams change and the support for efforts to help their child go unsupported (de la Luz Reynoso & Tidwell, 1996; Harry et al., 1995). Despite the ongoing fiscal resources and omnipresent parent education efforts nationally (PACER, 2013), there is little information about parents as adult learners, how parents learn informally about special education, and the relationship between informal learning and parent involvement. Therefore, it is necessary to take a more in-depth look at how parents approach their learning and what continues to be overlooked or underutilized regarding parents’ informal learning insights. Investigating and documenting how parents are learning informally and what relationship this learning has to their involvement in their children’s progress at school forms the basis for this study which is described in the following section.

**Purpose of the Study and Guiding Research Questions**

The purpose of this study is two-fold and will: explore how parents of children who receive special education services learn informally about special education and investigate the relationship between informal learning and parent involvement. The specific research questions that guide this study are:

1. How do parents learn informally about special education?
2. What is the relationship between informal learning and parent involvement?

**Conceptual and Theoretical Framework**

This study draws insights from both informal learning and social cognition theory. The conceptual or theoretical framework of an investigation, or the system of concepts, assumptions,
expectations, beliefs, and theories, supports and informs the research and is foundational to the research project (Maxwell, 2004; Miles & Huberman, 1994; Robson, 2011). The following sections will provide a brief overview of informal learning assumptions and social cognition theory, and explain how they provide a way to inform this study.

**Informal Learning**

Informal learning is ubiquitous and often transparent learning that takes place in everyday life in natural contexts (Illeris, 2004). Discussions about informal learning date back to the early 20th century, beginning with the theorists Dewey (1916) and Lindeman (1926). Early research by Allen Tough (1967, 1979) led to natural learning conceptions that were self-directed and provided experiential insights regarding the learner’s readiness and orientation to learn. One large-scale study defined informal learning as activities involving the pursuit of understanding, knowledge, or skill (Livingstone, 1999). Also considered were dimensions of the level of intentionality and consciousness, as well as subcategories of self-directed, incidental, and implicit or tacit learning (Schugurensky, 2000).

Initiated by the demands of the learner’s life, informal learning is principally learner centered. In relationship to this study, examples of informal learning can include any learning by parents outside organized special education courses or more formal learning contexts using a structured curriculum. Examples may include parents’ self-directed learning, networking with other parents, coaching or mentoring other parents. Marsick & Watkins (1990) share that the trigger for learning comes from the environment or the context of everyday living; for example, parents involved in meetings or situations in which there is a need to identify important educational information. A parent's response to having incomplete or outdated information to make an informed decision for their child's education program could trigger a need to learn more.
Informal learning is often nonlinear with the learners’ needs met wherever or whenever they arise. Each informal learning event is considered a complete instructional unit (Livingstone, 2001). Further, the dynamics of learning are multi-directional, with social interactions that are often a part of the informal learning experience (Coletta, 1996).

Informal learning informs this study since parents as adult learners continue to modify their beliefs, their values, and their knowledge (Brookfield, 1981; Cranton 1992). Informal learning assumptions provide a way to define parents’ ways of learning regarding intentionality and awareness at the time of the parent’s learning experiences. Informal learning also relates to parents as they are involved in, among other activities, meetings, or parent education opportunities daily. However, informal learning assumptions do not explain all aspects of this study, and therefore theoretical components of social cognition theory were also used to help describe the cognitive, social and behavioral aspects of parents learning.

**Social Cognition Theory**

Formulated initially by Albert Bandura (1977), social cognition hypothesizes that individuals follow observable steps, regulate their behavior, and plan self-generated outcomes. For this study, core components of social cognition attempt to explain parents’ thinking and social aspects of their learning while pursuing informal learning projects or activities. Social cognition provides guiding assumptions for this study in that parents make observations, reflect on their learning, and regulate their behavior, or make necessary adjustments to their learning behavior based on these observations and reflections. Parents also demonstrate “acts done intentionally” (Bandura, 1997, p. 3) to pursue or follow their quest to learn.

Central to social cognition is the concept of perceived self-efficacy whereby a person believes they can complete actions, and adapt and exercise control over the actions they take.
Through self-reflection on their actions and learning the individual changes their perspective which influences the level of their confidence (Bandura, 1997). Social cognition assumes “a sense of personal efficacy is represented as propositional beliefs and these beliefs are embedded in a network of functional relationships with factors that operate together in the management of realities” (Bandura, 1997, p.3). Parents, having reflected on their sense of accomplishment, have learned or gained capabilities to accomplish acts, are encouraged by how they achieved the actions and will repeat these acts or behavior to produce these achievements again.

Personal agency through self-efficacy or believing the self can produce the same control and outcomes inform this study as it explains how parents think their knowledge, insights, and skills will produce results. Parents, through informal learning methods, may obtain greater control over their learning and may have an increased intrinsic intention to repeat their learning. Personal agency plays a pivotal role in the theory of social cognition, but it is not the sole determinant of action. Along with personal agency through perceived self-efficacy, social cognition theory assumes that the individual’s interactions with the environment will be interactive and reciprocal (Bandura, 1986; Candy, 1991). Through personal agency and self-efficacy or believing in one’s sense of control over their actions, social cognition also assumes that back-and-forth interactions with others are central to learning. Dialogue offers a way for individuals to be reciprocal in their communications. Through discussion, a parent can gain additional information through reflection as they problem solve and self-examine what they are learning (Bandura, 1986; Candy 1991). For this study, parents are known to engage with others to identify how they will solve problems. They reflect on whether their self-generated actions were productive or not. Social cognition assumes that adults observe and model others’ social behaviors, act on and exercise control or regulate their actions, and learn by interacting with
others. Parents of children with disabilities often seek out other parents to discuss issues, topics, joys, and sorrows. They report finding great comfort in socializing through reciprocal verbal interactions with other parents who have had similar situations (Frew & Zhou, 2013).

Social cognition theory, therefore, provided a lens through which to explain the cognitive and social behavioral aspects of this study. Social cognition assumptions added to informal learning dimensions, specifically observation, modeling, self-regulation, and self-efficacy. Social cognition theory, in conjunction with informal learning constructs, provided additional assumptions to explain more comprehensively how parents of children receiving special education plan, act on, reflect, and adjust their learning through cognitive as well as social-behavioral aspects. Next, is an explanation of the methodology used for this study.

**Methodology**

Because methodology is a “broad approach to scientific inquiry specifying how research questions should be asked and answered” (Teddlie & Tashakkori, 2009, p. 21), this study used a sequential exploratory mixed method design, with the intent to first explore the phenomenon of parents’ informal learning. This design used multiple epistemologies that were necessary and provided a way to collect qualitative data to explore parents’ informal learning and then collect quantitative data to explain, refine, and extend qualitative findings by identifying the relationships found in the qualitative data (Creswell, 2009).

The mixed methods research design offered rigorous methods in both qualitative and quantitative research designs, multiple strategies of integrating the data, and consideration for timing, weighing, and theory were critical research planning elements (Creswell, 2013; Teddlie & Tashakkori, 2009). Mixed methods research provided a way to collect scientific inquiry
findings from both open-ended and closed-ended methods for the integration of the results (Creswell, 2013).

The selection of a mixed-methods sequential exploratory design included a qualitative phase that provided a way to capture the parent voice. The qualitative aspect warranted the use of purposeful sampling of 10 parents of children who received special education services and who engaged in informal learning practices (Creswell, 2013; Miles, Huberman & Saldana, 2014 Patton, 2015). Open-ended questioning methods were most appropriate to gather parent perspectives (Riessman, 2008) and interviews used a semi-structured, open-ended set of questions to capture parents' perceptions, specifically how they made meaning of their informal learning experiences. Additionally, being able to explore responses and extend questions during the interview process yielded additional information as the qualitative methodology was flexible and emergent in design (Merriam, 2009). Findings from the first qualitative phase were integrated to inform the development of a larger-scale survey as an existing survey did not currently exist.

The second, or quantitative, phase extended the first phase findings by integrating or mixing data and themes from the first phase qualitative results. The survey developed investigated parent learning experiences, which included demographic information (e.g., age, gender, ethnicity, income, education of parents and disability type and grade of their child) for analysis. Seven different points of contact from across the Mid-Atlantic region forwarded a recruitment email to their prospective parent organization listservs to recruit parent participants. In keeping with the mixed methods sequential-exploratory research design, parents who completed the survey met the same participation criteria as phase one parents, or their responses were not collected and not included in the data analysis. Chapter Three provides additional
information about study participants. All online responses were obtained through a secure, 
survey web platform to maintain participants’ confidentiality. Findings were analyzed for 
confirmability of first phase themes and analyzed using descriptive and comparative statistical 
analysis methods.

**Significance of the Study**

As indicated previously, there currently exists limited research focusing on informal 
learning about parents in the adult education literature and no known studies that explore parents' 
informal learning and the relationships between informal learning and parent involvement in 
special education literature. This gap in the research indicates the significance of this study for 
both adult education and special education.

This study looked at informal learning rather than more structured parent education or 
parent training as an opportunity to understand with greater depth how parents are learning as 
most are not typically attending training. By first exploring parents' perspectives of their 
informal learning activities, insights, and practices, this study was able to document that parents 
are learning and that they are an overlooked resource for their child's IEP team. Parents were 
self-directed in their learning, setting aside time to learn but their child's school was not their 
reliable source of information. Parents starting with little or no knowledge experienced barriers 
in accessing information from schools. However, parents used other ways of learning, with a 
strong preference for written materials and online access to resources and other sources of 
information. Parents were able to gain the knowledge, skills and become empowered to address 
some of the barriers they experienced when working with schools.

Their path of learning was not always linear as parents learned incidentally about 
complex information resulting in the random nature of the search for information. Parents found
helpful resources often by chance when seeking other information or using sources outside of school. Parents, as they gained self-efficacy, shared information with other parents: some sharing in more structured ways, developing leadership roles, and integrating the knowledge to advocate for change for more parents. Parents were learning implicitly about IEP teams' capabilities, openness, and willingness to collaborate by how the IEP team responded during meetings. Through ongoing self-directed learning, parents identified ways to work more closely with teams after reflection and adjusting their approach.

Special education is an entitlement for children with disabilities, and laws and regulations support parents' involvement in the education team process (IDEA, 2004). Schools are required to ensure that parents can be contributing members of their child's special education program. With the existing barriers mentioned earlier, parents were expected to make decisions about complex education information as a required member of the individualized education team. This study revealed that most individualized education program teams still do not include the parents' knowledge, skills, and perspectives during IEP meetings to the extent that allowed for the full parent participation in the IEP meeting. Parents realized a need to learn, navigated special education policies, procedures, and local practices, as well as learned complicated education information.

This study adds to the literature concerning building relationships with families and suggests that a shift to looking at parents' informal learning can provide insights and recommendations for schools as parents are an underutilized source of information. It also revealed new and different perspectives to consider for current parent involvement practices. Further, this study yielded helpful information to inform parent education opportunities not previously known or considered by schools (Hoard, & Shepard, 2005). With these additional
insights into how parents contributed more fully in their child’s education, this study contributed information, potentially impacting school procedures, or policies, as they move beyond traditional forms of parent involvement practices (Ishimaru, 2014). This study also offered insights into how parents’ informal learning provided a way for parents to learn, increasing self-efficacy and providing additional insights into how parents can build and foster connections with school teams. Most importantly, this study supported the notion that parents are already deeply involved in their child's education. Parents gained knowledge, skills, and became empowered by their learning and increasing understanding of essential sources and resources, and became a resource for educators and schools. This study, moreover, provided additional information to the overall research of adult informal learning by adding to the existing literature on parents and their informal learning practices.

**Assumptions**

As with any research, there are assumptions that the researcher holds in approaching the study, as well as assumptions that exist in the literature of adult education and special education. These assumptions of the study include:

1. Parents are the first teachers of their child and have much to offer the educational context.
2. Parents are adult learners and have assumed the social roles and responsibilities of adulthood in their culture (Cranton, 1992) including parenthood.
3. Parents can identify and articulate their experiences from their parent – educator relationships.
4. Parents want to be involved in the education of their children.
5. Parents learn informally.
Limitations

Like the existence of assumptions in the everyday study, there are also limitations and strengths. Some of the possible limitations for this study include:

1. Parent participants may have viewed their learning from a traditional, more formal method and, therefore, overlooked or had difficulty recognizing their informal learning practices (Livingstone, 2007).

2. Keeping with the sequential exploratory mixed method design and integrating qualitative and quantitative data to build on or confirm first phase findings for generalizability to more significant numbers of parents, there was a possibility that some salient themes were not chosen from the first phase qualitative data for the design of the second phase survey (Denzin 1978; Jick, 1979; Tashakkori & Teddlie, 1998).

3. Purposive sampling of participants selected in Phase One did not yield a diverse parent representation (Teddlie & Yu, 2007).

4. The probability sampling used for Phase Two did not yield a diverse parent population (Teddlie & Yu, 2007).

Strengths

In addition to the existence of limitations there are strengths to the everyday study. Some of these strengths include:

1. The use of a mixed method sequential exploratory design provided a way to collect rich narrative samples of how parents learn informally about special education with priority on the qualitative, first phase. Interviews illuminated the parent voice, which is often ignored, overlooked, and noticeably absent in the K-12 special education literature.
2. This study also has a strength in that it has the potential to extend qualitative interview findings through a quantitative research survey method. Having confirmatory findings of qualitative data can lead to more generalizable results for similar parent groups. (Creswell, 2015).

3. The use of the adult learning theories of informal and social cognitive learning is absent from the special education literature and can serve to stimulate a discussion around the parent involvement quagmire that permeates the national special education narrative.

Definition of Terms

1. **Formal learning** is the hierarchal and highly organized teacher-centered designs of curriculum and instruction such as colleges or universities, adult education organizations, and community-based agencies. It is often associated with formal learning contexts with quasi-educational organizations which includes community organizations or business and industry, and upon completion, a diploma or certificate is awarded (Lovell, 1980)

2. **Informal learning** is usually intentional learning but not highly structured. It may include self-directed learning, networking, coaching, mentoring, and performance planning that provides for opportunities to review learning needs (Marsick & Watkins, 2001). It is learner-centered and triggered by the demands of the learners’ life, environment, or context. The learning is holistic, contextual and activity or experienced based, and often arises in situations where learning is not the primary aim. Informal learning dimensions may include both conscious and unconscious aspects (Schugurensky, 2000).

3. **Parent Involvement** is the role the parent plays as a partner in the family-professional partnership. More specifically, the role the parent plays as a partner in the family-professional relationship centering on: a) communication, b) commitment, c) equality, d)
skills, e) trust, and f) respect. This definition provides a way for addressing the primary special education activities, parent learning, and the personal contributions parents make in their role as a parent involved in special education (Blue-Banning et al., 2004).

4. **The sequential exploratory design** is one type of mixed methods designs. The first phase collects and analyzes qualitative data. The second phase (quantitative data collection and analysis) is completed to explore and extend the first phase of qualitative findings. The connection of data occurs after the qualitative data analysis to inform the development of a quantitative data collection survey tool. The integration of data occurs at the end of the two-phase design. With this design, there is a potential for generalizing qualitative findings to different samples. It also is used to determine the distribution of a phenomenon within a chosen population (Creswell, 2009).

5. **Individualized education program (IEP)** is the individualized education program that is a written statement for each child with a disability. At least one time a year the IEP is revisited for review and revision as appropriate.

6. **Individualized education program (IEP) team** is a special education team the public agency must ensure is in place. The IEP team for each child with a disability includes the following members: the parents of the child, not less than one regular education teacher of the child, and not less than one special education teacher of the child. It also includes a representative of the public agency who is qualified to provide or supervises the provision of specially designed instruction to meet the unique needs of children with disabilities, is knowledgeable about the general education curriculum; and is knowledgeable about the availability of resources of the public agency. It may also include an individual who can interpret the instructional implications of evaluation results. At the discretion of the parent or
the agency, other individuals who have the knowledge or special expertise regarding the child, including related services personnel as appropriate and whenever appropriate, the child with a disability will be added to the team.

**Organization of the Dissertation**

Chapter One sets the background for this study on parents’ informal learning experiences and the investigation between informal learning and parent involvement. It establishes an adult learning rationale as well as a rationale in the field of special education for undertaking this study. This introductory chapter includes the background of the problem, a statement of the purpose of the study, an explanation of the problem to be addressed, and research questions that guide the study. Also included is a summary of the theoretical framework, an overview of pertinent literature, definitions, assumptions, and limitations and strengths. A review of the findings that indicated the significance of this study completed this chapter.

Chapter Two presents a summary and analysis of the related literature providing more specific support for the study and identifying the gap in research that exists. Chapter Three details the explanation and rationale for the methodology including data collection and analysis methods. Chapter Four discusses qualitative findings, and Chapter Five addresses quantitative results. Chapter Six interprets and summarizes the integrative findings from both qualitative and quantitative phases and includes a discussion and review of implications for theory, practice, and further research.
CHAPTER TWO

LITERATURE REVIEW

The purpose of this research study is two-fold: a) to explore how parents learn informally about special education, and b) to investigate the relationship between parents’ informal learning and parent involvement. This chapter is divided into four main sections that review the relevant bodies of literature and begins with an historical review of special education and the parent role, followed by a comprehensive review of empirical literature on parent involvement in special education and the definition of parent involvement used for this study. The second section will then review parent education and training literature related to special education types of resources and learning contexts followed by an overview of the empirical research of online learning. The third section will discuss the theoretical, conceptual, and empirical literature of informal learning and social cognition, the primary theoretical frameworks used for this study, and a review of what is known and unknown about prominent adult informal learning models. This chapter then concludes with a summary of how this literature review serves as a foundation for this study.

Parent Involvement in Special Education

There is extensive research investigating parent involvement as it relates to general PreK-12 public education over the last several decades (Epstein, 1986; Fan & Chen, 2001; Henderson & Mapp, 2002; Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins & Closson, 2005; Jeynes, 2005, 2007; Swap, 1990). The next section reviews the historical origins of special education with a focus on the parent role, and will include a comparison of the broader general education and special education literature on parent involvement, highlighting the differences between them and ending with the definition of parent involvement used for this study.
**Historical Review of Special Education**

In 1965, legislators drafted legislation relevant to the education of students with disabilities, and Congress passed the Elementary and Secondary Education Act (ESEA). Title I, the first national entitlement program for children that mandated equal access for all children, high standards, and accountability in public schools and successive revisions of ESEA, currently the Every Student Succeeds Act (2015), provided additional services for students who required specialized programming and individualized education programs (IEPs). The subsequent passing of the Vocational Rehabilitation Act of 1972, and several court cases directly related to the education of students with disabilities, led to the passing in 1975 of the Education for All Handicapped Children Act, Public Law 94-142, which was later revised and rewritten to become the Individuals with Disabilities Education Act (IDEA) in 1990.

During the first few decades of special education, from the late 1970s to the late 1990s, parents of children with disabilities were concerned about the exclusion of their children from the educational opportunities available for able children and advocated for educational programs for their children, including those with significant cognitive disabilities (ARC, 1970; Brodinsky, 1979). In its infancy, special education administrators and educators saw a rapid increase in students who would receive help from special education. More significant numbers of special education students began attending public school, which, a few years earlier, had not been allowed, and national discussions shifted to finding more funding options for the increased number of students. Not surprisingly, districts experienced limited resources to create and support expanding special education services such as specialized support services of speech and language therapy and physical therapy (Abeson, 1981).
Additionally, in its infancy, most professionals defined special education as following a medical model. A definition offered by Reger (1972) held two underlying assumptions: 1) behavior that deviates in a negative direction from normative standards reflects personal disease, such as an illness, disturbance, disorder, or dysfunction; and 2) behavior that is disordered must be changed within the individual by a curative process. With this medical model, there remained disagreements in the practicality of special education, specifically with how and what to teach a child with disabilities. Most educators were not able to define clearly what special education would look like for the full range of student needs (Reger, 1972). The medical model assumed that a comprehensive diagnosis of physical, neurological, or biological disorders would precede intervention in educational settings. This model emphasized the child’s disability and did not allow for a focus on the child’s strengths and abilities nor how education efforts through specially designed instruction could help a child learn. With this medical approach to disabilities, there was minimal consideration of parents’ views, and there was little parent education offered during this time.

Parents were viewed through the medical model lens and medical professionals, particularly mental health professionals, categorized parents of special education children into one of four groups on an attitudinal-behavioral and a normative-contextual axis: neurotic, suffering, dysfunctional, or powerless (Ferguson, 2001). The medical model reinforced a traditional conceptualization by health professionals of mothers as dysfunctional and at fault for their child’s disability (Ryan & Runswick-Cole, 2008). The delivery of special education services by educators at that time mirrored the medical model resulting in substantial adverse emotional reactions from parents (Neely-Barnes, 2010) and a lack of ability to meet the families’ needs to educate their child.
Special education began to shift slowly from a medical model to a social or educational model of service delivery. This shift was primarily due to strong parent desire and organized parent group advocacy rejecting the medical model, viewed as exclusionary and restrictive to the potential of their children to learn. A social or educational model of service delivery emphasized a strength-based approach that focused on what special education children could achieve when included with other children educated in regular education classrooms and allowed to become a part of the social interactions with their same-aged peers in mainstream classrooms. A strength-based focus was a shift to an educational process, and parent roles began to transition from a perfunctory routine role as receiver of deficit related information to a more involved, attentive, and engaged parent role. As a result, parents with children receiving special education services focused on providing access to the general education curriculum and instruction and expected high standards of education for their children. As a result of parent influence, policymakers began reshaping special education policy with a particular focus on how to include children more in quality education and involving parents in more meaningful ways (Hendersen et al., 1986).

This participation included increased school and parent collaboration, particularly with the parent as a shared decision maker in the education of their child (Kalyanpur et al., 2000). However, collaborative parent involvement and parent education efforts offered by schools remained secondary to competing issues of how educators and administrators should best provide services directly to special education children, how the administration should address teacher professional development, and how to give the administrators strategies to prepare budgets to account for the growing costs of education (Valle, 2011).

As a result, national discussions concerning parental involvement and parent education primarily centered on the amelioration of existing barriers that parents reported (Harry et al.,
Barriers included how parents accessed services and breakdowns in home-school communication. Specifically, professionals were not listening to parents and educators were not demonstrating support and freely sharing information with parents (Harry et al., 1995; Leitch & Tangri, 1988). As early as the mid- to late-1980s, parents reported educators were primarily ignoring their concerns and exhibiting an overall lack of empathy. Additionally, parents shared the perceived marginalization of their children, teacher disinterest, low teacher to student communication of expectations, and a lack of rich instructional design (Ashby, 2010; Gabel & Danforth, 2008; Neeley-Barnes et al., 2010; Zionts et al., 2003). Subsequently, federal reauthorizations of The Individuals with Disabilities Act (IDEA) addressed these issues with mandates for schools to increase and or expand parent education efforts (ESSA, 2015; IDEA, 1997, 2006).

With an evolving social education model, concomitant distancing from the medical model of special education services, and expanded parent education efforts, more focus was given to parent involvement and a participatory and collaborative parent role gradually evolved (Auerbach, 2007; Heir, 2001). However, a need for research on how to continue to improve on and sustain collaborative interactions between parents and teachers remained (Nakawaga, 2000; Rodriguez et al., 2015; Valle, 2011).

**Defining Parent Involvement in Special Education**

To understand parent involvement as it relates to special education, an examination of how the parent role is unique to special education is necessary. The IDEA serves as the legal statute crafted by the federal legislature to promote positive educational outcomes for all children receiving special education services and their families (U.S. Department of Education, 1995). As a result, the Office of Special Education Programs (OSEP), the national oversight and
monitoring body of special education, has outlined national goals for public schools that require schools to work closely with parents. These requirements elevate the importance of both schools and parents to work collaboratively. However, most descriptions or definitions of the parent involvement role are broad and lack specificity regarding special education. Parent involvement constructs can vary significantly, and the next sections will include the most promulgated parent involvement frameworks in education from a broader perspective and then review parent involvement in special education and discuss how these differ, ending with a parent involvement definition selected for this study.

**Parent involvement from a broader education perspective.** The majority of parent involvement research appears in the K-12 general education literature. While this literature is not specific to the role of parents involved with special education, it provides insight into some of the factors that influence the general population of parents involved with schools. This literature often focuses on how parent involvement can act in partnership with schools to positively impact school results for children and their families (Swap, 1995), help children’s social-emotional development (Fan & Chen, 2001) and assist in relationship building for higher academic achievement across gender, race, socioeconomic status (SES) and academic ability (Jeynes, 2005). Findings from this research show general agreement that parent involvement increases student achievement for greater student educational outcomes (Hoover-Dempsey, Bassler, & Brissie, 1987).

The broader education field views parent involvement as helping with homework, serving in the classroom, and attending parent-teacher meetings. Descriptions of the role of the parent listed parents as partners, as collaborators, as problem-solvers, and as advisers or co-decision-makers (Henderson et al., 1986). Psychological constructs are used to explain why parents get
involved, including a) role construction, or what parents believe they should do; b) self-efficacy, or what parents believe they can do within the context of their child’s school program; c) and parent perception of invitation, or the degree that the parent feels the school welcomes, values, and expects their involvement (Hoover-Dempsey & Sandler, 1995). Subsequent research added to these constructs by looking at parents’ perceived life situations as a reason for parent involvement and studying parent perceptions of other life demands that mediate school involvement (Hoover-Dempsey et al., 2005). Epstein (2009) offered a way to view parent involvement and delineated six types: a) parenting, b) communicating, c) volunteering, d) learning at home, e) decision making, and f) collaborating. Epstein’s framework provides some relevance for this study in that it speaks to the role of the parent as a learner, decision maker, advocate, and collaborator with the school; but, this framework lacks specificity when describing the explicit functions unique to parents who have children receiving special education services.

**Parent involvement including special education.** Despite reported connections noted between parent involvement and increased student achievement (Epstein, 1986; Henderson et al., 1986; Hoover-Dempsey et al., 1987), these correlations or connections do not always hold for children receiving special education services (Burke, 2012). While Burke (2012) believes that utilizing Epstein’s six-component framework for parental involvement is a “jumping off point” (p. 211) for those interested in defining parent involvement more clearly for special education purposes, Burke encouraged further exploration and indicated that there are additional factors that hold more weight in the special education context. One key factor is that federal mandates require parent involvement as one of the six principles of IDEA.

Ysseldyke, Algozzine, and Thurlow (2000) delineated specific parent involvement factors and home and school collaboration aspects that related exclusively to parents of children
receiving special education services. This focus on obligatory parent involvement indicated that parents needed to respond to and engage with educators as a member of the initial evaluation and IEP team. This literature also underscored the assumption and expectation that parents would become more knowledgeable and involved in their child’s individualized and often highly specialized educational program (Burke, 2012). Therefore, an accurate description of the parent role in special education must address the comprehensive nature and intricacies of special education (Turnbull & Turnbull, 2001).

Confounding the clarification of the parent role, special education, as a field, shifted away from the use of the terminology of parent involvement to family involvement and through research defined family involvement as a partnership with six foundational principles: a) communication, b) commitment c) equality, d) skills e) trust and f) respect. The research used focus group participants that included 127 caregivers of children with and without disabilities, 53 service providers and administrators, in addition to 18 interviews with families with limited English proficiency. The study specifically allowed for the parent voice in identifying the principles of the parent role from the parent perspective. It created a profile of partnership components that identified common elements across a wide range of cultural, geographic, and socio-economic points of view. To specify these six themes, the communication theme encompassed the quality of sharing resources in a way that was clear, honest, tactful and demonstrating openness to the exchange of information. The commitment theme included both parents and professionals working in a partnership sharing a sense of assurance about each other's devotion and loyalty to the child and family, in addition to recognizing each other's belief in the importance of family-centered goals. Equality or the sense of equity was delineated through decision making and service implementation, and actively working to ensure that all
other members of the partnership felt equally powerful in their ability to influence outcomes for children and families. Skills included team members demonstrating competence, and displaying the recommended practice approaches to working with children and families. Trust was defined further as parents and educators in partnership sharing a sense of assurance about the reliability or dependability of character, ability, strength, and truth. The final theme respect, captured the esteem for one another, exercising nondiscrimination, nonjudgmental and courteousness regard and demonstrating this esteem through actions and communications.

These six themes were identified jointly by parents and educators as mutually-supportive interactions between families and professionals and focused on meeting the needs of children and families as a unit offering more specificity to the required family-school partnerships (Blue-Banning, Summers, Frankland, Nelson, & Beagle, 2004). The role of the parent in special education, then, shifted to that of a partner in the special education process providing the specificity needed to view the parent’s role in special education (Burke, 2012).

For this study, parent involvement is defined as the role the parent plays as a partner in the family-professional partnership. More specifically, the role the parent plays as a partner in the family-professional relationship (Blue-Banning et al., 2004) centering on: a) communication, b) commitment c) equality, d) skills, e) trust and f) respect. This definition provides a way for addressing the primary special education activities, the learning, and the personal commitment parents make in their role as a parent involved in special education.

The review of the overall literature on parent involvement in general education and special education discusses the effects of, the motivation for, the types of, and the barriers to parental involvement illustrating the broader scope and study of parent involvement and reveals that general education parent involvement factors encompass some but not all aspects of the role
the parent with a child receiving special education services plays. As a partner in the family-professional relationship the focus is on the individual child and ensuring a free and appropriate education. The next sections will detail empirical literature that addresses the dimensions of the role of parent involvement factors at a deeper level.

**Empirical Studies on Parent Involvement in Special Education**

To locate studies about parent perceptions of parent involvement in special education, literature searches defined selection criteria as those studies that only used parents as study participants. This ensured that the parent voice would be the focus of the literature review. The search criteria also included research articles that addressed special education-related issues and topics primarily within the K-12 grade range, which allowed for analysis of parent perspectives on school-aged special education topics. These criteria aided in a purposeful analysis to highlight central or unresolved issues, find gaps, connect related and contrasting concepts or areas, and examine new perspectives specifically applicable to parent involvement in special education (Cooper, 1998; Montouri, 2005).

Meeting these criteria, literature searches began with peer-reviewed journals from the databases of ProQuest, Psych Info, Rehabdata, EBSCO Host, and Google Scholar. Search terms used included: *parent involvement, parent participation*, and *special education*. Searches completed produced a considerable number of articles and those selected met the thematic criteria mentioned previously. Discarded were conceptual articles as well as articles that did not apply to or address the K-12 grade range.

To avoid overlooking articles, a second search using the database Education Resources Information Center (ERIC) revealed more articles by combining thematic-related terms of *perspectives, engagement, empowerment, perceptions*, and *views* with original search terms of
parent involvement and participation. Again, discarded, were articles that did not meet the same choice criteria as mentioned previously.

To ensure a thorough search, selected articles that met previously mentioned content criteria and included the words parent involvement and participation in the title were found through a manual scan of citation indexes or relevant special education and education-related journals. Also reviewed were relevant article references or bibliographies. The review ended when titles began reappearing after each search attempt. This literature review revealed 16 empirical articles with ten qualitative studies, five quantitative studies, and one mixed methods design. There will be a discussion of descriptions, summarizations, evaluation, and or clarifications of selected articles in the next section (Cooper, 1988).

Of the qualitative articles, the total number of parents as participants ranged from 6 to 32 parents, and all studies use sample populations of biological parents. The study analyzed the discourse of parental involvement from Chinese Canadian mothers from upper-middle-class households (Lai & Vadeboncoeur, 2013). Another study targeted biological married parents of children with autism spectrum disorders (ASD), who enrolled their child in public schools (Stoner, 2006). The study included eight parents from four student cases, ranging in age from 6-8 years old. Other studies offered insight from a range of urban and rural population (Applequist, 2009; Rodriguez et al., 2014; Trainor, 2010; Zionts et al., 2003). Only one study (Applequist, 2009) looked at views of parents of children from a broader age span (1-18) with all other studies focusing on a K-12 grade range. A qualitative longitudinal study spanning three years investigated the participation of African American parents of 24 preschoolers in an urban school district of significant size (Harry et al., 1995). Another focused solely on African American parents of children with moderate to severe cognitive and behavioral disabilities
(Zionts et al., 2003). Most qualitative study respondents were primarily mothers (Lai et al., 2013; Leiter et al., 2004; Rodriguez et al. 2014; Trainor, 2010).

Qualitative studies included semi-structured interviews, face-to-face interviews (Applequist, 2009; Nowell & Salem, 2007; Zionts et al., 2003), or focus groups (Neeley-Barnes et al., 2010) to obtain data about parent perceptions, insights, attitudes, and beliefs. One study used an inductive content analysis method to gather data from written comments. Researchers reviewed and categorized complaint documents generated by parent reports over one year (White, 2014). Another study used ethnographic interviews with parents and professionals, observation of conferences, and examined student documents (Harry et al., 1995). By using this type of interview design, including observation and review of student documentation, longitudinal data secured a rich sample for analysis. Another study used thematic code analysis (Maxwell, 2013) for pre-mediation agreement, mediation experience, mediation agreement, perceptions of the mediation outcome, and changes in the post-mediation relationship. This cross-case analysis illuminated patterns of convergence and divergence in the use of mediation experience across participants from a within-case analysis (Nowell et al., 2007).

All four quantitative studies conveyed significant numbers of parent participants ranging from 180 (de La Luz Reynoso & Tidwell, 1996) to 398 (Nutting et al., 2006) and 1,417 (Hernandez et al. 2008) to 1,864 children (Leiter et al., 2004). Four of the five quantitative studies used survey design. They focused on examining parent beliefs, knowledge, attitudes, perspectives, and satisfaction of special education services (de La Luz Reynoso & Tidwell, 1996; Hernandez, et al., 2008; Nachsen, et al., 2005; Nutting, et al., 2006), with the third quantitative study focusing on parent initiation of requests for additional services and attitudinal characteristics of the parents who reported problems or barriers (Leiter, et al., 2004).
Additionally, one study looked explicitly at factors that contributed to empowerment in parents of school-aged children with and without developmental disabilities (Nachshen & Minnes, 2005).

Finally, the literature review included one mixed method study looking at parents’ views regarding the schools’ efforts to involve parents (Rodriguez et al., 2014). There were 96 parents from 8 different school districts with a representation of a full range of K-12 sites including buildings larger than 15,000 students and above, and locations of smaller schools of 1,000 and below. Participants were White, 55%, Latino, 24%. Black 17%, Multiracial 3%, with a remaining % unknown. Respondents were 67% mothers or stepmothers, 14% fathers or stepfathers, 5% grandparents, and 6% legal guardians. There were seventeen focus groups held followed by a survey and parent questionnaire completion. The protocol for the parent discussion questions was a federally sponsored and validated tool that looked at the parent and school affiliations. Data analysis included a grounded theory approach to coding for participants’ comments, a review of codes, and the development of code families and themes. There were 8 themes identified relating to the schools’ efforts to facilitate parent involvement: 1) parent-school collaboration varies, 2) parent involvement depends on the child's progress, 3) parents initiate involvement, frequency, and variety, 4) effectiveness of communication varies, 5) transitions, and schoolwork can be stressful, 6) parents' trust in schools varies, 7) parents’ experience and knowledge effects views of school and 8) the individual teacher or professional matters.

There was an analysis of the purpose of the study, subjects of the study, and methodology design of the 16 articles reviewed. I also completed a synthesis of the 16 articles to connect and integrate findings, to identify current, unresolved, and emerging concepts/ideas, and to find gaps.
in the research. From this comparative process, I describe three themes found (Rocco & Hatcher, 2011) in the next section that inform special education parent involvement.

**Key Themes from Empirical Literature**

The three significant themes that emerged from the analysis of the articles on parent involvement in special education are a) parents report complex parent involvement insights and a need for parent involvement sustainability; b) a variety of unresolved barriers remain for parents, and c) parents express a need for greater knowledge and skills. In discussing these themes in more depth, overlap and intersections were clear across the studies.

**Complexity and Sustainability**

Earlier work (Hoover-Dempsey et al., 1987, 2005) reported that parent characteristics, such as self-efficacy, parent role construction, and child, teacher, or school efforts affected parent involvement disparities. This literature review confirmed earlier findings but also exposed more complex insights and multifaceted aspects of parent involvement (de La Luz Reynoso & Tidwell; 1996; Harry, et al., 1995; Hernandez, et al., 2008; Lai & Vadeboncoeur, 2013; Nachshen & Minnes, 2005; Neeley-Barnes, et al., 2010; Nowell & Salem, 2007; Stoner & Angell, 2006; Zions, et al., 2003).

Studies selected for this review showed that parent knowledge and quality of teacher interactions were essential, but that there are more subtle relationships between schools' efforts to facilitate parent involvement and parent-reported involvement (Rodriguez et al., 2014). Parents often become involved as a result of negative reasons, such as when schools resisted their requests to become involved, failed to provide meaningful services and accommodations for their child, were not receptive to parents’ input or feedback, or did not include them or discuss choices in decisions about their child’s program (Rodriguez, et al., 2014). Parents’ views
revealed a deeper understanding of parent involvement dynamics. Parents’ view of schools’ efforts to engage them affected their views of the quality of educational services delivered to their child. Parents reported not caring as much about what the school was doing to involve them if they perceived their child was making progress in their educational program (Rodriguez et al. 2014).

Discourse analysis of parents’ communications of schools’ policy and procedural documents included “parents must” but “school may” positioning parents as problems and viewed as under-involved, subordinate, or inexpert (Lai & Vadeboncoeur, 2013). Parents reported experiencing marginalization during parent-school interactions, and that their role was that of advocating, educating, informing, ignoring, or hiding (Neeley-Barnes et al., 2010). Parents engaged in multiple roles, a negotiator, monitor, supporter, and advocate, as they checked their child's educational programs and interacted with school professionals (Stoner & Angell, 2006). Findings also emphasized the importance of trust as vital to active parent involvement and, often, medical and educational professionals negatively affected their tendency to trust (Rodriguez et al. 2014; Stoner & Angell, 2006). Overall, the literature stressed a call for additional study on how to sustain parent involvement, specifically, research on trust and building stronger relationships (de La Luz Reynoso & Tidwell, 1996; Harry, et al., 1995; Hernandez, et al., 2008; Nowell, & Salem, 2007; Zionts, et al., 2003).

The number of opportunities offered for parents to become involved and parents’ efforts to navigate within the special education system increased overall (Applequist, 2009; Leiter & Wyngaarden Krauss, 2014; Neeley-Barnes et al., 2010; Nutting, et al., 2006; Trainor, 2010; Zionts, et al., 2003) and the data indicated awareness and efforts by minority parents to support their children’s schooling and a desire to be involved in their child’s education (de La
Luz Reynoso & Tidwell, 1996; Hernandez, et al., 2008). The collective findings indicate a strong desire to be an active participant eventually gives way however to disillusionment, and negative interactions as ongoing parent involvement wane over time (de La Luz Reynoso & Tidwell, 1996; Harry et al., 1995; Nowell & Salem, 2007) affecting parent involvement sustainability.

Studies also showed an increase in depth and breadth in the analysis of parents’ perceptions, as well as reports of implied, unspoken, or assumed parent involvement expectations on the part of educators. Parent involvement literature reported outreach attempts increased from previous decades in type and scope and these outreach attempts stimulated greater parent involvement (de La Luz Reynoso & Tidwell, 1996; Lai & Vadeboncoeur, 2013; Nachshen & Minnes, 2008; Nowell & Salem, 2007; Rodriguez, et al., 2014; Stoner and Angell, 2006; Zionts, et al., 2003;). Studies also revealed an increase in seeking parent perspectives opposed to earlier historical articles gathering data primarily on frequency of parent meetings or parent group activities of more traditional nature (Harry et al., 1995; Nowell & Salem, 2007; Rodriguez et al., 2014). Studies expanded on dimensions of parent involvement, specifically how and when parents initiate involvement as it relates to their child’s needs, how frequently they initiate, the variety of topics for discussion, and the level of effectiveness of the communication, as well as satisfaction of special education service outcomes and how parents report their satisfaction and needs (de La Luz Reynoso et al., 1996; Harry, et al.; 1995; Hernandez, et al., 2008; Lai et al., 2013, Nachshen & Minnes, 2005; Nowell & Salem, 2007; Rodriguez, et al., 2014; Stoner & Angell, 2006; Zionts, et al. 2003). Collectively, there are multidimensional factors reported by parents in what is parent involvement in the special education literature.
There continue to be ongoing studies on special education complaints filed by parents and related to parent involvement. Two large-scale studies looked at legal issues that sparked or triggered direct parent involvement (Nowell & Salem, 2007; White, 2014). One study focused on mediation or the attempt to resolve related educational issues between parents and schools (Lowell et al., 2007). Findings reported requests by parents to promote involvement on an ongoing basis following the mediation with schools and formal parent-initiated complaints. Concomitantly, the review revealed literature that included a more in-depth analysis of complex reporting, systems of parent involvement, dissatisfaction with schools, and specific information on the evolving process of school mediation (Lai & Vadeboncoeur, 2013; Rodriguez et al., 2014).

**Unresolved Barriers**

Barriers to accessing special education services have appeared previously in conceptual literature (Santelli, Turnbull, Marquis, & Lerner, 1997; Valle, 2011), and current findings from this literature review show that barriers persist. However, the mention of barriers is more pervasive in the literature specifically about access, miscommunication, unmet cultural and linguistic needs, and socioeconomic barriers. Almost all articles found that access and overall lack of resources to understand their child’s education program were viewed as major issues or challenges for parents (Applequist, 2009; de La Luz Reynoso & Tidwell, 1996; Harry, 1995; Hernandez, et al., 2008; Lai, Y. & Vadeboncoeur, 2013; Leiter & Wyngaarden Krauss, 2004; Neely-Barnes et al., 2010; Nowell & Salem, 2007; Nutting, et al., 2006; Stoner & Angell, 2006; Trainor, 2010; White, S. E., 2014; Zionts, et al., 2003). When working with schools, several studies reported parents’ perceptions of experiencing limited decision-making opportunities, negligible communication, and inconsistent willingness to make necessary adjustments in their
These experiences place parents in a subordinate position and result in unresolved and universal barriers to parent involvement (Applequist, 2009; de La Luz Reynoso, 1996; Harry, 1995; Neeley-Barnes, 2010; Zionts et al., 2003). The identification of disability and the system of labeling their child by specific terms constrained the parents in participating fully in the community, and accessing all types of settings, transportation issues, and barriers of collaboration between home and school (Applequist, 2009; Neeley, et al., 2010; Trainor, 2010; Zionts, et al., 2003). Parents were viewed as inexpert, nonprofessional, and subordinate to professionals, or overly assertive or controlling if they actively engaged in discussions with professionals on an ongoing basis (Lai et al., 2013). Moreover, they were uninterested or under-engaged if they did not maintain an ongoing dialogue, for example, due to language and discomfort with the special education system preventing participation with professionals (de La Luz Reynoso & Tidwell, 1996; Harry et al., 1995).

Reports of other barriers included delays in responding to parent requests to resolve issues, delays in response to requests for additional services, misperceptions on cost prohibiting services requested by parents, and negative, misguided assumptions made by professionals that persisted over time and resulted in legal issues (Harry, et al. 1995; Trainor, 2010; Zionts, et al.). One study found educators misconstrued parents’ requests for education services and that professionals had exaggerated parent issues (Leiter et al. 2004). Parents asked for greater respect for parents and children from school personnel and had a desire for greater cultural understanding and showed acceptance of differences by school personnel, as well as improved teacher-parent and parent-parent partnerships (Zionts et al. 2003).
Research findings reported varying degrees of satisfaction with IEP content, implementation of the IEP, evaluation of needs, overall conference procedures, staff qualifications, the need for more parental participation, and the lack of avenues for parental influence (Harry, et al 1995; White, 2014; Neeley-Barnes, et al., 2010; Zionts, et al., 2003). Additionally, literature revealed, despite an ardent desire from parents to be involved with schools, parents reported cultural and linguistic barriers and issues around belief systems (de La Luz Reynoso & Tidwell, 1996; Trainor, 2010; Lai, 2013; Zionts et al., 2003).

There is also a growing body of literature discussing social and cultural capital and inequalities in special education of who gets what service and who gets another (Hernandez, et al., 2008; Lai, 2013; Lalvani, 2012; Leiter, 2004; Trainor, 2010; Zionts, et al., 2003). Relative to SES factors, one large-scale survey with over 1,000 parent respondents from one of the largest school districts in the U.S., reported that the parents from the lowest socioeconomic group (less than $15,000/yr.) had overall less frequency of involvement, but that this group valued education and expressed a strong desire to be involved. Because of less participation, such as attendance at Individualized Education Program (IEP) meetings, parents from lower income groups reported fewer difficulties with the special education system. If they had attended essential meetings, they were less likely to report that they did not receive legal rights information and were not involved in critical decision making. They were more likely to report satisfaction with their child’s services and were less likely to report not receiving entitled services via the IEP. This group of parents, however, said it took a great deal of effort to secure services for their child when requested (Hernandez et al., 2008). In another study of special education practices, findings showed entrenchment in a deficit model and in implicit educational ideologies that position children with disabilities as the other, presenting significant barriers (Lalvani, 2012).
Parents’ accounts revealed that educators described educational placements, or where children spend their educational day, in highly appealing ways, thus confusing parents and resulting in added barriers to identifying appropriate educational services. Those children educated in more segregated settings were from lower SES backgrounds and that parents from higher SES were able to advocate for more inclusive placements for their children. These findings collectively show significant and persistent socioeconomic barriers for those parents with fewer financial resources (Lalvani, 2012).

Need for Knowledge and Skills

The third major theme centered on the parents’ need to access and develop knowledge and skills to build greater self-efficacy (Lalvani, 2012; Nachshen & Minnes, 2005; Neeley-Barnes, et al., 2010; Nowell, & Salem, 2007; Nutting et al., 2007; Rodriguez, et al., 2014; Zionts, et al., 2003). Parents expressed their need to learn more information to gain self-efficacy and the ability to competently impact their child’s life (Lalvani, 2012; Leiter et al., 2004; Neeley-Barnes et al., 2010; Nowell & Salem, 2007; Rodriguez et al., 2014). Parents felt less informed or uninformed in a study that examined parents’ beliefs and knowledge about key special education regulations, including federal legislation, civil rights, special education funding, the role of parent involvement, and accommodations for testing that allowed their child to access higher stakes assessments required by federal mandates (Nutting et al., 2006). When parents were uninformed, it affected their views of the school negatively (Leiter et al., 2004; Rodriguez et al., 2015). Productive conversations with schools around important decisions led to positive impacts on parent-school relationships and an increase in self-efficacy (Nowell & Salem, 2007). Parents reported not knowing what to expect when they report difficulty understanding educational and diagnostic reports, understanding their child’s disability, having difficulty helping their child
with academic work, and reported that they are intimidated by the IEP meeting (Rodriguez et al., 2014; Zionts et al., 2003). They stated a need to: understand the laws and school procedures for their child to be identified as eligible for special education (Lalvani, 2012; Nutting et al., 2006; Rodriguez et al., 2014); become their own advocate to negotiate services; and to understand labels, placement decisions, and developing meaningful educational programming for their child (Lalvani, 2012). Parents also reported confusion about the least restrictive environment or educational placement continuum, having little awareness of the full range of educational environments that would be available for their child. Parents expressed a need to learn how they could secure institutional discourse, to understand more about the implicit or hidden agendas that occur during meetings and educational ideologies shared by schools. Parents’ perceptions of their advocacy and vigilance were critical to the development of meaningful educational programming for their children (Lalvani, 2012; Nachshen & Minnes, 2005; Zionts et al., 2003). Parents perceived negativity from the schools toward their children and themselves and expressed a need for information and aid in using community support services (Zionts et al., 2003).

Parents of lower SES stated that they were less connected with other parents. They were less likely to join local parent groups or meetings due to barriers that made it difficult for them to attend and did not readily have funding to participate in memberships to national or regional organizations, although they reported a willingness to join and learn. They also did not have the same level of access to resources or support (Lalvani, 2012). On the other hand, parents from a higher SES perceived themselves as advocates, questioning some of the recommendations made by schools. They reported that their advocacy helped their child’s situation. These parents indicated that they viewed themselves as a parent educator as they took on a leadership role in
educating professionals about their child’s needs, taught others about special education and laws, and organized parent groups. For rural parents, an overarching theme of isolation and limited awareness of IDEA services resulted in the need for complete and unbiased information (Applequist, 2009). Parents felt they needed information so that they could be an advocate for their child to educate and inform educators and others (Lalvani, 2012; Neeley-Barnes, 2010).

Parents showed support, or the lack thereof, as critical to increasing self-efficacy, or the ability for parents to learn and, in doing so, felt confident of repeating that experience. Family, professional, and community supports were vital (Neeley-Barnes, 2010). Proactive approaches to assisting with parent and school conflicts, such as mediation, often did not result in conflict resolution and negatively impacted parents’ self-efficacy in future relationships with the school, especially if schools did not follow through with mediation agreements (Nowell & Salem, 2007).

A pivotal study looking at naming factors that contribute to the empowerment of parents of children with and without disabilities found that self-efficacy, along with greater knowledge and skills, were key dimensions of empowerment (Nachshen & Minnes, 2005). Additionally, the only significant path to empowerment originated from the family's resources, showing that a secure network of social support and family-centered services are critical to a sense of empowerment (Nachshen & Minnes, 2005). To develop greater self-efficacy strategies, parents needed to obtain information from and use community support services, improve relationship-building activities, and request professional help to find assistance for their child (Zionts, & Zionts, 2005). Overall, to keep collaboration between parents and the school, it was necessary to have ongoing learning of knowledge and skills and increased self-efficacy (Lalvani, 2012; Nachshen & Mines, 2005). The next section will include an analysis and discussion of research in parent involvement in special education literature and the gaps in the research that remain.
Critique and Discussion of Parent Involvement Literature

Analysis and integration of the parent involvement literature review revealed limitations, central themes, and potential insights to guide further research. The limitations overall were in the small representative sample of respondents. Parent involvement perceptions came primarily from parents of younger children. Respondents were primarily mothers, limiting the range of insights from fathers, grandparents, and other caregivers. Therefore, the literature did not reflect a range of perspectives from either gender or current family roles. Also limited were the number of studies addressing a full range of perspectives involving race/ethnicity, socioeconomic, and language issues. This lack of diverse perspectives overall could influence future recommendations for expanded parent or family involvement applications.

Although the qualitative studies reviewed were helpful for reporting parent perspectives and lived experiences but are not generalizable to a larger population of parents. Quantitative studies had large subject sizes but produced information that offered explanations for limited questions and topics. Of all studies reviewed, only one mixed method design study supplied an opportunity to explore parent views and confirm findings for generalization to larger groups of parents. Warranted are more mixed methods study designs to give insights to larger parent populations.

In sum, then, central themes noted from parent involvement literature included an increasing complexity in parent involvement factors and a need for parent involvement sustainability (de La Luz Reynoso, & Tidwell, 1996; Harry, et. al., 1995; Hernandez et. al., 2008; Lai & Vadebaoncoeur, 2013; Nachshen, & Minnes, 2005; Neeley-Barnes, et. al., 2010; Nowell & Salem, 2007; Rodriguez, et. al., 2014; Stoner & Angell, 2006; Zions, et. al., 2003); a variety of unresolved barriers (Applequist, 2009; de La Luz Reynoso & Tidwell, 1996; Harry, et.
al., 1995; Hernandez, et. al., 2008; Lai & Vadeboncoeur, 2013; Leiter & Wyngaarden Kraus, 2004; Neeley-Barnes et. al., 2010; Nowell & Salem; 2007; Nutting, 2006; Stoner & Angell, 2006; Trainor, 2010; White, 2014; Zionts et. al., 2003) and greater parent self-efficacy (Lalvani, 2012; Neeley-Barnes et. al., 2010; Nachshen & Minnes, 2005; Nowell, & Salem, 2007; Rodriguez, et. al., 2014; Zionts, et. al., 2003). Recommendations for further study included how to sustain parent involvement, specifically in regard to trust and interrelationship building (de La Luz Reynoso & Tidwell, 1996; Harry, et al., 1995; Hernandez, et al., 2008; Nowell, & Salem, 2007; Zionts, et al., 2003) and the further exploration of parent training to address the need for building knowledge and skills and self-efficacy. There was little mention of how learning opportunities may provide a way for parents to access new information, reflect on what they need to know or have learned, and approaches to problem solve how they may go about making necessary adjustments to their daily communications or actions as they engage with schools (Applequist, 2009; Lalvani, 2012; Nowell & Salem, 2007).

Most literature on parent involvement found that parents showed they needed and wanted more formal types of parent training that would include for example learning about a set of special education procedures, policies or regulations about special education. This literature review did not reveal studies that discussed parents’ informal learning to gain greater knowledge, skills, and self-efficacy. There were no empirical studies that looked at informal learning and its relationship to parent involvement. Articles that mentioned informal learning, via less formal or through online use, did not share the outcomes or effectiveness of the informal learning or application of knowledge gained over time. With this noticeable gap of empirical information on how parents are learning informally, the next section will explore parent educational
opportunities and leaning options to gain additional insight into the relationship between informal learning and parent involvement.

**Parent Educational Opportunities**

Empirical parent involvement literature reviewed earlier in this chapter revealed a preponderance of evidence that parents have a strong desire to gain knowledge and skills so they can build greater self-efficacy and competently impact their child’s special educational programming (Lalvani, 2012; Leiter, et al., 2004; Neeley-Barnes, et al., 2010; Nowell & Salem, 2007; Rodriguez, et al., 2014). However, parent involvement literature did not reveal how parents use educational options nor how they learn about special education. One study did find that when parents reported greater involvement in their child’s special education program, they reported greater self-efficacy as a teacher of their child, service developer, advocate, decision maker, and learner (Rodriguez et al., 2014). Subsequently, it is necessary to review the literature on the contexts, and ways parents gain knowledge and skills and whether the methods used lead to parent involvement. The following literature review includes historical, conceptual, and empirical literature about parent education for parents of children receiving special education or related services, as well as other similar types of parent education, such as parent training, parent group learning activities, and online learning opportunities.

A search of the literature on parent education used the following combination of vocabulary search terms: *parent education, parent training, parents and informal learning, parents and online learning, parent group(s) and informal learning*, each combined with the term *special education*. I reviewed prominent regulatory and historical documents on parent education and parent training and conceptual articles that delineated parent education from parent training. The review includes empirical research that explored parent education and
training outcomes. However, despite the significant narrative nationally mandating parent education and training, there was sparse empirical and conceptual literature found concerning parent training, online learning, and group learning offered in direct relation to parents and special education. This literature review begins with a discussion of articles that provide historical or foundational information.

**Parent Education Historical Review**

As discussed in earlier sections, the primary parent role in special education has evolved from parents as detached to parents as contributing members of the educational team (Hehir, 2005). More recently, national parent education resource centers established across the United States provide large-scale parent learning opportunities for families, including Parent Training and Information Centers (PTICs) and Community Parent Resource Centers (CPRCs) (Heeden, Moses & Marshall, 2011; OSEP, 1984, 2013). These parent education resources provide key topics for study that help parents understand special education policies, regulations, and processes. These may include Child Find regulations, which require identifying children in need within designated timelines. The training may address how to exercise parents’ legal rights to benefit their child (mediation training or due process considerations). The President’s Commission on Excellence in Special Education and New Era: Revitalizing Special Education for Children and their Families (2002) reiterates the need for greater federal and state parent education efforts in special education. The Individuals with Disability Education Act (IDEA, 2004), the No Child Left Behind Act (NCLB, 2001), and now Every Student Succeeds Act (ESSA, 2015) all discuss the importance of parent engagement directly. This regulatory language emphasizes decision making as part of the IEP process and emphasizes parent education as a way to promote parent involvement. These national laws extended the need for
parent education and training opportunities and emphasized relationship building, parent empowerment, and shared parent decision making.

Moreover, parents are in a position to promote the development of the well-being of their child with a disability supported by the commitment of national and state entities (Dunst, Trivette, & Deal, 1988). More than 100 CPRCs and PTICs completed a report that includes data on the number of parents served. The study solicited data from 5,000 parents via phone in addition to online surveys. Outcomes included a list of services provided to parents and anecdotal stories of the impact of the parent training centers. The report also revealed that across the U.S., 665,529 parents received parent center training, presentations, or individual help and there were 19 million contacts made through newsletters and websites (PACER, 2013). The National Parent Technical Assistance Center collected and compiled in a report, service-related data on 99% of parent centers. In addition to collecting service-related data, each center also made 50 follow-up calls to families who received their services in the previous year. A random sample of 25 parents who received individual assistance and 25 parents who attended a workshop responded to survey questions that revealed the impact that Parent Center services had on their child and family. Online surveys collected outcome data from parents and professionals. However, overall the effectiveness of the national parent center education or training services offered to parents is unknown. Next, there is a review of conceptual, and empirical articles on parent education and training. This literature review provides delineation of the terms and results of the search for empirical studies from both parent education and parent training.

**Differentiating Parent Education and Parent Training**

The definition of parent education is the systematic presentation of information to parents to support their efforts and abilities to promote their child’s development (Kaiser & Mahoney,
Parent education differs from parent training. It is preemptive to prevent the future onset of problems. In contrast, parent training is an approach for intervening in existing conditions (Hoard & Shepard, 2005). Parent education universally targets the general population, with the expectation all will receive help from the topical information. Training, however, focuses on people and methods of service delivery that are different and for this study, is specific to parent needs. Both parent education and parent training; however, address groups of parents and have the goal of imparting information to and skills for parents (Fine, 1980). IDEA defines parent training as assisting parents in understanding the special needs of their child; providing parents with information about child development; and helping parents to acquire the necessary skills that will allow them to support the implementation of their child’s IEP (IDEA, 1997). Parent training includes intervention programs, taught by certified professionals, that focus on teaching parents how to deliver a component of the training, as part of the training model, for example, specific educational, emotional, or behavioral programs that address specific needs their child may have. The parent training may have a defined or undefined number of sessions, and often involves parents who have similar needs to learn about a special intervention or program for their child (Hoard & Shepard, 2005).

**Parent Education Empirical Research**

Despite significant federal and state education agency support, there is sparse empirical literature overall of the effectiveness of parent education efforts (Hoard & Shepard, 2005; Institute of Medicine, 1994; Medway, 1989). Of the few studies completed, The American Psychologist Association (APA) Commission on preventative violence programs, found that parent education offerings delivered preemptive service needs. Parent educational offerings often lack a theoretical basis, empirical support, and objective measurement techniques to
evaluate program outcomes (APA, 1993). There is sparse research on the effectiveness of parent education including those programs purporting to enhance parent skills. The Institute of Medicine (1994) found that virtually no controlled studies existed that had empirically evaluated parent education interventions of the late 1970s through the early 1990s.

Moreover, few empirical reviews critically examined the strength of parent education in achieving its goals, and none focused on the effectiveness for school problems and settings. A prominent study reviewed parent education effectiveness from the early 1970s to the mid-1980s (Medway, 1989). It examined the effectiveness of parent education from a broader population and provided a comprehensive review of parent education studies from the late 1970s to the mid-1980s. It reviewed parent education programs designed for a target group of parents by child need. However, for the parent program to be considered for inclusion in the meta-analysis, it could not include programs with direct child intervention and even though its targeted parents of children with a variety of needs, such as emotional, behavioral, health-related, it excluded parents of children with clinical diagnosis or disability. Fifteen of 24 studies made the final selection for review as a parent education program. The analysis revealed a mean effect size of .90, with parents and children from the reviewed programs showing gains in a positive direction that were 62% greater than control populations (Medway, 1989). However, the weaknesses of the studies included a lack of follow-up assessment and the use of measures of questionable validity and reliability (Medway, 1989).

Little empirical research is available for review from the last 20 years (Hoard & Shepard, 2005), despite the notion that parent education is productive and beneficial to increasing parents’ knowledge and skills about special education. A review of studies conceptualized as parent education (Hoard & Shepard, 2005) included 16 studies centering on education programs, used a
randomized experimental design, and targeted universal populations. To meet selection for review for the meta-analysis, parent education components had to be either conducted in elementary, middle, or high school settings or have school-related outcomes. Excluded were articles that had primary issues related to health conditions or provided solely program descriptions. Overall, findings showed that the effectiveness of the parent education studies varied considerably. Methodological strengths included sufficiently large sample sizes, valid and reliable measures, and random assignments, while weaknesses included lacking enough follow-up data and failure to isolate the effects of the parent education portion in multicomponent studies. Primarily, parent education studies included in the review targeted middle socioeconomic status homes, and limited diverse populations, and, therefore, they were not representative of the general population. Parent education was usually part of a universal or selective intervention used to prevent a vast range of target populations ranging from drug abuse to reading problems. These programs presented parents with primarily basic facts and knowledge about the target problem. Although there has been less research published on parent education specific to special education, parent training research is appearing in the literature. The following sections will address the sampling of parent training research to offer an overview of parent training intent, design, content, delivery, and outcomes.

**Parent Training Empirical Research**

Parent training literature included a variety of studies that looked at training targeting specific disabilities to practice that was more general and focused on special education topics. One of the first articles was a literature review looking at attention deficit hyperactivity disorder (ADHD) for school-aged children and their parents. This article reviewed fifteen years of empirical studies and evaluated the efficacy of ADHD parent training programs to determine
their effectiveness alone or combined with other types of treatment. Parents who were participants completed a psychological profile. They attended a variety of different training schedules to develop knowledge and skills to address their child’s behavioral needs effecting school-related achievement. Overall, the literature review found that parent training is successful in treating the primary symptoms of ADHD in school-aged children. The most effective parent training programs affected parent behavior to change child behavior. Collectively, the review revealed that parents reported increased confidence in their parent management abilities and an increase in self-esteem. Other benefits were a reduction in their stress which leads to a reduction of ADHD symptoms and a reduction in child noncompliance (Kohut, & Andrews, 2004).

To convey the significant increase in parent training studies, one meta-analysis selected for review looked evidence of effectiveness (Bookman-Frazee, Stahmer, Baker-Ericzen, & Tsai, 2006) across 22 studies in three primary areas: 1) research methodology, 2) parent training, and 3) parent training procedures. Included in the review were only studies that used both experimental (randomized clinical trials and single subject designs) and quasi-experimental (pre/post and those without control groups or random assignment) and those studies that had a clear description of parent training components and procedures that involved data collection. Only one parent training from this review showed parent training efficacy. This study compared the benefits of parent training of two disability populations: autism spectrum disorders (ASD) and disruptive behavior disorder (DBD) from 1995-2005. Findings revealed specialized training features, type and depth, that could inform applications of the parent training approaches for a more significant number of parents.

One study looked at the development of parental advocacy skills, delivered through a computer-based instruction design (Glang, McLaughlin, & Schroeder, 2007) and used a
randomized trial, with parents assigned to treatment (Brain Injury Partners CD-ROM) or control (alternate CD-ROM) condition. It found that computer-delivered training had utility for parents, as 31 parents of children with traumatic brain injury reported higher post-intervention adjusted means for application, knowledge, and attitudes scale scores than the control group.

Another study looked at investigating parent-professional training and a follow-up study that focused on parent collaboration in special education (Whitbread, Bruder, Fleming & Park, 2007). The training center paired with ten parent advocacy agencies to deliver a nine-hour training course on special education process. It emphasized the importance of collaboration between parents and professionals and had participation of 1,300 parents and educators. Training modules included the laws that govern the special education process, planning IEPs, person-centered planning, and family-school partnerships. The training design emphasized the importance of collaboration between parents and professionals in creating successful programs. Traditionally underrepresented parent populations (e.g., families from urban locations and Hispanic and African American families) responded to open-ended prompts. There were positive training results in that parents could advocate more effectively for their child. Parents also felt training procedures were acceptable and socially relevant.

Another study investigated the outcomes of parent advocacy training (Burke, 2013). The premise of the study was that parents of children receiving special education services have difficulty navigating the special education system. Advocacy training is one training method designed to help teach parents learn how to secure appropriate educational services for the parents' child. This study compared two advocacy training models, offered to parents of children receiving special education services who were having difficulty navigating the special education system. The models included: The Special Education Advocacy Training (SEAT) and the
Volunteer Advocacy Project (VAP). Results showed that parents learned how to assert themselves, learned special education rights, and how advocates may train other advocates in special education. Both models specified structured coursework and instruction by known to be experts in the field of special education. Researchers found that there were more layers of parent training needed prior to offering to parents, however, in doing so, they noted this might discourage underrepresented groups from participating. In addition to advocacy training, parent-to-parent programs studied encouraged face-to-face discussion and problem solving through dialogue.

National organizations and conferences specialize in offering support, services, and information to families of children who receive special education services. Parent-to-Parent programs help parents who have a child with special needs connect with another parent. Parent-to-Parent programs have been in existence for over 25 years and have become a validated national resource for parents (Santelli, Turnbull, Marquis & Lerner, 1997). This participatory action research study used a survey to collect both quantitative and qualitative data from program administrators, veteran parents, and referred parents. The first phase survey focused on assembling information on components, structural organization, activities, and perceptions of the program and the second phase survey occurred 18 months later after completion. It also looked at parent activities and opinions about the effectiveness of program activities in meeting family needs. Over 375 local Parent-to-Parent program administrators and 600 referred and veteran parents, representing 115 different Parent-to-Parent programs from 43 of the 50 states, participated in the survey between 1989 and 1993. Significant findings revealed that Parent-to-Parent allowed parents to receive emotional and informational support from another parent who is experiencing a similar set of circumstances and offers a way to find the next steps to problem
solve issues or concerns. Also, although the primary mission of Parent-to-Parent is to provide support to referred parents, veteran parents benefitted from the matched experience as well, with 84% of experienced parents reporting they received personal support from the program coordinator or through opportunities for support group activities.

In summary, common themes noted from the few empirical studies found on parent education and parent training centered on the effectiveness of the parent training and the need to increase rigorous analysis of parent components, consistent data collection, and follow-up analysis for long-term efficacy. For large parent education studies, results were widely varied, and there was difficulty in determining effectiveness due to different philosophies, program designs, purposes, and materials. The lack of evidence to support large parent education endeavors at that time was thought to be due to the failure of parent education programs to collect, analyze, and report data on parent-reported changes after participating in parent education programs (Fine & Henry, 1989; Kaiser & Mahoney, 1999). This reasoning could potentially have resulted in the reduction of parent education promotions and the reason for little research on parent education published in the last 20 years (Hoard & Shepard, 2005). Although there are few empirical studies on parent educational opportunities, the articles found were rigorous in design and obtained sufficient participant numbers for the intent of the study. Next, a critique and discussion of parent training follow.

**Critique and Discussion of Parent Education and Training Literature**

A few parent training studies reviewed and primarily discussed barriers and inclusion issues in training design, content, and delivery. Studies noted that training formats needed to be revised to allow for greater inclusion of parents from underrepresented populations (Burke, 2013; Santelli, 1997; Whitbread et al. 2007), and to be offered to a larger parent population.
Studies also mentioned parent confusion about a range and specificity of special education topics, misinterpretations of educational terms or jargon, as well as instructional concepts that may be critical to their child's academic performance and overall development (Lai & Vadeboncoeur, 2013; Leitch & Tangri, 1988; Martinez, Conroy, & Cerreto, 2012; Milian 2001; Ostendorf, 2017; Trainor, 2010; Turnbull, et al., 2002).

The literature on parent training for specific disability types dominated this empirical information review (Bookman et al., 2006; Kohut & Andrews, 2004) indicating a steady rise in parent training efficacy studies. Despite the significant amount of resources and useful training design recommendations, there continued to be lingering barriers to parents' access to parent training whether it is highly structured or less structured. Parent training efforts nationally addressed disability categories as the specific target for content and design (Bookman et al., 2006; Glang et al., 2007; Kohut & Andrews, 2004). Narrow options for training may inadvertently confound parent training opportunities for those parents who have children with different or highly specialized needs (Bookman et al., 2006). Additionally, there is often little consideration noted in the literature for the parent perspective in the design of more structured parent training and, in doing so, researchers or professionals may have overlooked or did not make considerations for barriers parents face, including time, cultural and/or linguistic, economic, and technological access challenges (Bookman et al., 2006; Glang et al., 2007; Kohut & Andrews, 2004).

This review of parent training literature illustrates how helping the larger parent population is problematic. Parent education is only one part of a more comprehensive intervention design for children and exemplifies the vast array of parent training models and the
components designed for specific child-related disabilities. As a result, training can become more like a medical model design in that parents are first “evaluated” for acceptance into the study. These designs prevent the larger population of parents from receiving help from parent training on a larger scale (Kohut & Andrews, 2004). Additionally, providing training formats that address a more substantial parent population for example, and using technology as a platform for teaching, is problematic (Glang et al., 2007). Studies in the literature review included parent advocacy training programs across multiple sites (Burke, 2013; Whitbread et al., 2007). These training efforts considered a larger parent population need, however, scaling up and determining the specific benefits to children are necessary to determine greater educational outcomes (Santelli et al., 1997).

Overall, each study brought to light the extent and types of training designs, topics, and implementation of parent education and training. There is little mention of informal learning as a component of the training or how parents learned outside of the structured training except in two studies (Burke, 2013; Santelli et al., 1997). These training designs included parent-to-parent discussion as part of the training design offering emotional and informational support. More training elements like the use of face-to-face discussion or developing problem-solving skills to address special education issues, were found beneficial in these studies. It is also well documented that parents meet with instructional and legal issues, particularly those from underserved populations (Harry, 2002; Milian, 2001; Ostendorf, 2017), and that parent emotional and informational supports were beneficial. However, there were minimal reports on how parents learned the information while engaging in parent education or training. There was no mention or analysis of how parents reflected on their learning, applied problem-solving skills, or planned to change their actions. Training outcomes did not mention how parents would
approach their learning differently as only more formal training, and learning models were studied and described from a more formal training perspective (Marsick & Watkins, 1990; 2001; Marsick, 2009; Schugurensky, 2000). Next, to build on the knowledge found from this review of parent education and training, the next sections will include a review of the online learning.

**Online Learning**

For this study, the focus is on parents of children with disabilities and informal learning of special education. It is therefore essential, to look at how parents are using the Internet and accessing information online, as a growing number of parent education and training resources offer online learning options (OSEP, 2013). Online learning and Web 2.0, for this study, are viewed as tools or methods used to search and find information, comment on special education topics, and share information or socialize with other parents or individuals interested in learning more about special education. This portion of the literature review of online learning used combinations of the following search terms: *online learning, parent Internet use, parents’ use of social networks for learning, and online parent training*, paired each with the term *special education programs or informal learning*. The next section will begin with a review of Internet use nationwide and then look at use by the general parent population.

**Online Learning Empirical Research**

As background, in recent decades, computer usage and Internet access have become increasingly important for gathering information, looking for jobs, and participation in a changing world economy (U.S. Census Bureau, 2016). In 2016, the U.S. Census (American Community Survey, 2018) revealed that 89% of households had a computer, which includes smartphones, and 81% had a broadband Internet subscription. The survey measured smartphone ownership or use and tablets separately for the first time, in addition to a more traditional
desktop or laptop computers. Seventy-six percent of households had a smartphone, and 58% of households had a tablet, but the desktop or laptop computers still led the way with use by 77% of households. Smartphone use has become most common among younger families (headed by people under the age of 45), by households headed by Blacks or Hispanics, and families with low incomes (under $25,000/year). Households headed by Hispanics were more likely to have a smartphone than households headed by non-Hispanic Whites. A small percentage of families have smartphones but no other type of computer for connecting to the Internet. These “smartphone only” households were more likely to be low income, Black, or Hispanic.

High-connectivity or a laptop or desktop computer, a smartphone, a tablet, and a broadband Internet connection, ranged from 80% of households with an income of $150,000 or more to 21% of households with an income under $25,000. Homes with an Asian head-of-household were more likely to own or use a desktop or laptop, or own or use a smartphone, own or use a tablet, and have a broadband Internet subscription. Households in suburban or metropolitan areas were likely to report owning or using each type of computer (desktop or laptop), a smartphone, or a tablet, and subscribing to the Internet than their non-suburban or non-metropolitan counterparts. Overall, households with children under the age of 18 years old and English-speaking families were more likely to own or use computers and have broadband Internet access. Next, I will review national surveys from the general population that had specific questions for parents.

The literature review also revealed a synthesis report (Allen & Rainie, 2002) that explored findings from surveys conducted by the Pew Research Center’s general research on the impact of the Internet on Americans. Data gathered from the Pew Research Center's Internet, and American Life Project (Allen & Rainie, 2002) surveying American adults and teenagers
found parents with children under 18 years of age were more likely to have used the Internet than non-parents, or those who do not have a minor child living at home. Other survey results reported parents had a greater incentive to have Internet access for their children, most believed children needed to know about computers and the Internet to succeed, and parents were less fervent Internet users than wired non-parents. Parents were less likely than non-parents to use the Internet on a typical day, with 54% of parents with Internet access online on an average day, compared to 60% of the non-parents who have Internet access. The survey revealed 44% of the connected parents said they went online at least once a day from home, compared to 53% of non-parents who had Internet access at home.

A March 2000 survey, also completed by Pew Research Center, surveying any parent whether they had a child with a disability or not, found parent respondents were likely to spend less time, only 81 minutes, on a typical session than a non-parent session who spends 94 minutes online. Interestingly, parents were more likely, though, to access health, lifestyle-enhancing, and religious information. Parents showed more interest in getting information from the Web and parents were more likely than non-parents to check sources and the sponsorship of the information. Online parents were more likely than wired non-parents to research school, training, or research for jobs. They were also more likely than non-parents to use the Internet to contact a local community group or association, a support group, or a religious organization. Parents were more likely than non-parents to say the Internet played a significant role in finding a new place to live, dealing with a medical condition for themselves or a loved one, and starting a hobby. Parents reported the Internet as a family and life helper: 26% said it improved the way they spend time with their children; 19% said it enhanced the way they care for their children's health, and 34% say the Internet improved the way they plan for family outings. A Pew
Research Survey completed in March 2001 revealed that 73% of the parents surveyed, reported the Internet helped them learn new things, 61% said their use of the Internet improved the way they connect with friends, and 22% said their use of the Internet improved their ability to find ways to deal with problems in their lives. Next, I will share the results of one empirical study found from adult education literature that looked at the Web and social media and informal learning through social media.

Heo and Lee (2012) examined adult learning using blogs and social network sites (SNS) and investigated six components of the Activity Theory framework with a small group of adults. It is unknown if these adults were parents or parents with a child with disabilities; however, this study is relevant as it pertains to how adults learn informally from online use. The participants were users of the Internet, Blogs and other social network sites (SNS) and had different goals: they were either sharing information and knowledge with others or retaining and nurturing a social relationship and interpersonal communication. Conceptualized labels found the division of labor in each activity system and included: for blogs; Knowledge Creator, Information Organizer, and Information Seeker and for SNS; Self-Reflector, Interpersonal Communicator, and Lurker. Also, different dimensions conceptualized described the adult learning process which included: a) Dimension 1: Acquisition from other Web users; b) Dimension 2: Meaning making and self-reflection; c) Dimension 3: Learning through social interaction and engagement. Researchers suggested that by defining these dimensions of an acquisition process, reflection process and practice-based community process, there may be value in using these as a framework to inform further study and analysis of how adults are learning online, adding value to the literature on adult informal learning. Next, I will detail a study that looked at parents as an online user based on purpose and satisfaction of Internet use.
As mentioned previously, national parent education and parent training centers have embraced the Internet and routinely encourage parents to go online to find special education resources. One study examined parents’ Web use, skills, and satisfaction of parents (not specific to parents of children with special needs) and examined results based on SES differences of 120 participants (Rothbaum, Martland, & Jannsen, 2008). Face-to-face interviews revealed parents' use of the Web for child-related information across key dimensions, including the extent of their use, the characteristics of parents' Web-search knowledge and behavior, the criteria used by parents to evaluate sites they viewed, and the level of parents’ satisfaction with search results. This study asked 60 mothers and 60 fathers from three socioeconomic levels, and two levels of age, to think aloud or narrate their thoughts and process so that researchers could capture a better understanding of how they searched and chose information. Researchers identified four core themes that included: a) Web use, amount and purpose of activity; b) searching, how participants sought and found online information; c) evaluation, ways participants judged trustworthiness (quality and credibility) of sites visited; and d) satisfaction or participants’ contentment versus frustration with results of searches. The study found that the higher the SES of the parent, the greater the Web use, the more extended amount of time, the more sophisticated the search skills (e.g., use of preferred search engine and efficient use of keywords), and the higher the skills in evaluation or ability to check trustworthiness of the information. The SES differences indicated that the parents with higher income had more sophisticated use and skills and were more likely to go online daily, find information about children, use the Web for more activities, such as information, news, and email, and seek more information for searching and evaluation. They also selected search engines based on relevant sites that were revisited and based the choices on the credibility of the site organizer. However, the study also found, in contrast, that the digital
divide in Web use and skills did not play out when it came to satisfaction, with minimal to no
evidence in greater satisfaction among higher and lower SES parents. With further analysis
researchers showed that since lower SES parents were not using the same degree of
sophistication in skills for searching and evaluation to determine trustworthiness, there was a gap
in the quality of information obtained by lower SES parents. Although lower SES parents may
have been satisfied, they may have been more likely to get information from dubious websites
that did not supply research-based information. This study reveals a use divide among parents of
different SES and a skill divide causing barriers to access rich content for searching, reviewing,
and revisiting credible location barriers when using the Internet indicating the use divide remains
robust despite satisfaction reporting across all SES.

Conceptual works were also available for review that supplied information on bringing
resources to families and professionals using the Internet. One such conceptual article provided
information specifically for parents of deaf and hard of hearing children via the Clerc Center,
which has the mission to provide parents with information and online supports (Lightfoot &
Meynardie, 2005). The informational article shared a wide range of technological and Web-
based options for learning and engaging in meetings with other parents developed at the Clerc
Center. The conceptual article summarized the expanded use of online learning, including
webcasts, learning communities, training modules, and books, and the advantages of using online
technology. It stressed the benefits of the use of technological resources and how the parent
progressed at their convenience, explored information in a multitude of formats in response to
individual learning needs and returned to content for later review and analysis. The article
stressed those different forms of online learning, including webcasts, learning communities,
training modules, and books and materials via an online source. Through the Clerc Center
digital system, they monitored who participated and gauged their reactions. The learning community’s virtual clubhouse connected parents with educators promoting online communication to share and learn together as they support deaf and hard of hearing students. It allowed parents to express ideas, questions, and practice for those who have the same needs. Training modules were self-paced, modular in design, and used four online learning qualities: chunk-ability, repeatability, pause-ability, and understandability, making learning via online modules more accessible.

Another conceptual article (Curtiss et al., 2016) discusses online family learning opportunities they called “education” for a parent with children with disabilities. They used an Internet-based instructional program to look at online family education. They defined online family education as efforts by practitioners to use online technology to support the implementation of instructional strategies at home. The article concluded recommending further research to determine if the service delivery model could be transferrable to other contexts.

In summary, online learning by parents with children with disabilities is not well researched at this time. To obtain an overall sense of more current technology and Internet use, studies reviewed were national surveys of the general parent population (Allen & Rainie, 2002; American Community Survey, 2018) and types of sites, the purpose of site selection, and frequency of use. I included one study that investigated adults online learning explored through an informal learning lens (Heo and Lee, 2012), and one study found that looked at parents from the general population, the reason for and methods used to search the Internet, and the evaluation and satisfaction of the use of the resources located based on SES (Rothbaum, Martland, & Jannsen, 2008). Not finding any empirical studies investigating parents who have children with disabilities and their use of the internet, I included conceptual articles found that looked at
specific populations of parents who had children with special needs. These articles discussed the potential benefit of current applications of online resource availability used by parents and communicated hope for the potential for increased accessibility and dissemination of parent information.

**Critique and Discussion of Online Learning Literature**

As mentioned previously, there is little empirical literature on online learning and parents. There were conceptual works on innovative ways to design and deliver a variety of education-related information using online options (Curtiss, et al., 2016). The new wave of innovation of online learning methods for the general adult population would require a closer review of parents using online education methods, and an investigation of online education tools for parents would need a literature review beyond the scope of this study. However, families of children with disabilities play a critical role in reinforcing developmental and academic skills, and parent education and more formal or structured training for parents is the cornerstone of special education parent supports (IDEA, 2004). It is apparent that parents’ learning done informally using the Internet has promise and could be pivotal for future applications.

Online learning literature specific to parents of children receiving special education is sparse. A multitude of dimensions requires a great deal more analysis to determine effective learning platforms for parents with children receiving special education services and supports. The early internet research examined SES and the differences of 120 parents’ Web use, skills, and parent satisfaction (Rothbaum et al., 2008). First wave research confirmed the “thought to be” access barriers, as well as skill barriers that existed for parents in their use of the Internet. There is a need for more studies, specifically to investigate insights into how parents are reflecting on what they are accessing and if they are evaluating the information. There is also a
gap in research of social networks or platforms such as blogs, chat rooms, Facebook, Twitter, or other structured communities of practice as well as social networks’ utility for parents of children receiving special education interventions and other topics.

Next, I will share the theoretical, conceptual, and empirical literature relating to informal learning with a historical review that frames what is known and unknown about informal learning and prominent informal learning models. This review will also include social cognition theoretical and empirical literature used as a second conceptual framework to provide additional explanations or insights to inform this study.

**Conceptual and Theoretical Frameworks**

The theoretical framework sets the foundation of the study and serves as a lens from which to view all aspects of the research project (Merriam, 2009). It is important to have guiding assumptions that provide reasoned explanations of the phenomenon studied (Kuhn, 1970) as there were other aspects than informal learning constructs found in this study that required explanation (Mills & Bettis, 2015; Silverman, 2001). Therefore, informal learning did not explain this phenomenon thoroughly and a second theoretical framework, social cognitive theory, helped to describe both the observable and more obscure findings of the study (Silverman, 2001). It is, therefore, necessary for the next sections to provide a historical review of the evolution and central assumptions of informal learning, typologies, and prominent models in the literature and the second theoretical framework, social cognition theory, with an analysis of historical origins and core assumptions (Bandura, 1986; Candy 1991).

**Informal Learning Historical Review**

Informal learning constructs and assumptions served as a lens through which to view parent’s informal learning for this study. Informal learning suggests that learning takes place in
private and non-organized contexts of everyday life (Illeris, 2004) and that informal learning in communities helps an individual’s greater understanding and learning of skills and knowledge required throughout life (Dewey, 1926). Directly influenced by Dewey, Lindeman advanced these beliefs sharing that by experiencing learning over time an individual would grow to gain more meaning in his or her life (Lindeman, 1926). Dewey (1938), valuing and encouraging informal learning, theorized that learning occurred through a cycle of problem-solving and reflective thought. This hypothesis spurred theoretical frameworks which emphasized a disjuncture between what the individual expected to learn and what happened. This disjuncture led to rethinking the nature of the problem and how an individual might proceed to look for solutions to the problem. Because solving a problem would involve one or more cycles of trial and error, the learning would take place as the individual was addressing the issue (Argyris & Schön, 1974).

Using parents as an example, in attempting to find a solution or desired outcome for an issue relating to their child’s special education program, the cycle of the problem-solving model helps to explain how parents observe what occurs, followed by self-correction and adjustment. Parents, upon reflection of their learning through trial and error, determine a potential alternate solution or solutions and can, therefore, change how they address similar situations in the future. This problem solving and reflective process sets the foundation for more current theoretical frameworks used today concerning informal learning (Marsick et al., 2008; Marsick & Watkins, 1990, 2001).

Also building on Dewey's early work, Hager and Halliday (2009) discussed the notion of making implicit context explicit. Through participation and experiencing different practices in different settings, the learner adjusted to do things differently. Hager and Halliday theorized that
“explicit context refers to those features of experience that all learners recognize but implicit context refers to those assumptions that learners take for granted and may require reflection and thought as it may be problematic" (p. 206). They go on to explain "…an unconscious assumption may sometimes be described best as an expectation of a kind of feel" (p. 206). For example, parents may realize after a meeting that they felt the meeting did not go as well as planned. They may share this feeling after they thought about and reflected on the situation. Parents may then share what they would have done or what they would have said differently had they noticed at the time the attitudes or perceived lack of transparency by the educator or administrator. Once they reflect at a later point, they may realize the underlying intent of a conversation or comment. These examples of constructs helped in explaining everyday experiences parents report. The next section includes an overview of themes that have emerged from the current literature on the evolution of the definitions of informal learning. It also discusses the progression of different theoretical frameworks and conceptual works that may supply a greater understanding of the depth and breadth of informal learning.

**Defining Informal Learning**

Informal learning is a learning process in that "every person acquires and accumulates knowledge, skills, attitudes as well as insights from daily experiences and exposure to the environment at home, work, and play, and attitudes of family and friends; travel, reading newspapers and books; or by listening to the radio or viewing films or television” (Coombs, 1985, pg. 24).

Debates about how to describe and define informal learning precisely are longstanding (Cameron & Harrison, 2012; Eraut, 2004; Hager & Halliday, 2006). These debates stem from more formal learning pedagogy and longstanding attention and priority given to formal
education. As a result, typology defined informal learning (Coombs, 1985; Illeris, 2004; Livingstone, 2000; Tough, 1979); was typically compared and contrasted to more formal learning contexts, was often not recognized as a form of learning for study. More formal settings were those that were institutionally sponsored, classroom-based, highly structured, impose a curriculum, and had the intent of certification through an evaluative process (Marsick & Watkins, 1990). Debates on the definition of informal learning have spurred researchers to analyze not only additional aspects of informal learning, such as type or length of the learning experience (Livingstone, 2001; Schugurensky 2000), but also the theoretical constructs and dimensional aspects of informal learning (Marsick & Volpe 1999; Marsick & Watkins, 1993).

Schugurensky (2000) offered that informal learning was a process and viewed it as occurring along with more formal and nonformal types of education. He differentiated formal learning, as highly institutionalized with a hierarchical structure that mostly referred to educational levels from preschool to higher education. Schugurensky, also theorized that nonformal learning included organized educational programs. These programs take place outside of a formal school system, are typically short-term and voluntary, and may consist of training lessons or workshops. There are instructors, teachers or facilitators involved, the curriculum varies based on the purpose of the learning activity, but there are flexibility and different degrees of rigidity, and non-formal education does not typically require prerequisites before engagement. There can be a certification element or not. There is a distinction made between the terminology in that when comparing formal education and nonformal education to informal learning; there is a careful distinction made not to use the term ‘education’ but rather ‘learning’ when defining informal learning. Schugurensky (2000) explained informal learning is the learning that takes place ‘outside the curricula of educational institutions' and not ‘outside
educational institutions,' as informal learning can also take place inside more formal education institutions. In these instances, that learning is independent of the intended goals of the intended structured curriculum.

Research to specifically delineate informal learning from other types of learning is still difficult, as informal learning occurs naturally, at any time and in any context. Informal learning is often difficult to recognize (Mariotti, 1999) or study. Dale and Bell (1999) noted that informal learning is difficult to standardize, systematize, and assess when learning has occurred, and the learner can potentially learn incorrect information. Informal learning, shaped by context and difficult to identify, may result in the learning of false or incorrect information, making incorrect information difficult to alter or improve on in that context.

Parent's informal learning experiences often occur in the everyday. For parents, it is usually about learning through contexts that are outside formal educational settings. Parents seek to gain knowledge, skills, or insights from daily experiences with their child. They sometimes learn about special education through miscommunications with their child’s educational team. They learn incidentally, when learning is not expected, when they discuss special education topics with their child's teacher or education specialist (Schugurensky, 2000). Incidental learning can occur at any time and can lead to confusion or misunderstandings. Parents learn when they consider added information; they often reflect on their assumptions, check their thoughts, and then adjust their ideas to problem solve difficult education decisions. They may also seek others to discuss and learn about educational topics, and they can learn from other parents or experts building self-efficacy and confidence to become a source of information.

For this study, definitions of the aspects of informal learning in workplace settings have parallel applications to parents’ informal learning, including integrating learning into daily
routines, triggered by an internal or external jolt, and occurring haphazardly or influenced by chance. Therefore, a review of the literature about individuals learning informally in the context of organization and workplace settings helped to inform this study. Workplace learning describes informal learning as integrated into the worker’s daily work and routines (Marsick & Watkins, 1990) and like parents’ informal learning, is part of their everyday learning. Informal learning has a value that comes when the worker faces an immediate challenge, impromptu problem, or unanticipated need (Marsick & Volpe, 1999). Parallel to workplace informal learning aspects, parents often seek out other parents or parent organizations to discuss current ideas and issues.

Most informal learning is tacit and not highly conscious (Schugurensky, 2000). It can go unnoticed at the time (Marsick & Volpe, 1999). Informal learning also includes unlearning old behaviors that have negative consequences and, therefore, free the individual to make a change (Mariotti, 1999; Magrath, 1997). As applied to the workplace setting, informal learning can be shaped by the employee’s emotions, which may react differently to individual work circumstances (Conlon, 2003) as emotions influence employee attitudes toward learning needs, and act to support learning and behavior change in general (Short & Yorks, 2002). When an individual allows a supportive mentoring relationship to flourish, encourages dialogue informally on work-related issues of concern, provides skill development, and facilitates or supports reflective practice, informal learning occurs (Laiken, 2001). Methods or strategies of informal learning include modeling, coaching, mentoring, networking, effective leadership and facilitation, individual characteristics, and capabilities (Marsick & Watkins, 1990). Parents often use strategies to model other’s actions and participate in networking activities.
Most current informal learning research continues to focus on refining theoretical frameworks, and studies focus on delineating greater breadth and depth of informal learning to inform and support further research. Included in the next section is more discussion on informal learning dimensions and aspects of informal learning beginning with insights into informal learning framework conceptualization.

**Framework/Model of Informal Learning**

As mentioned, a substantial part of informal learning literature centers on conceptual frameworks to support and guide future research. Informal learning is generally known to be the most widespread form of adult learning (Coombs, 1985; Livingstone, 1999), yet as late as 2009, scholars made appeals to formulate a more unified framework to support informal learning, research, and practice (Marsick, 2009). The next sections describe a historical development of theoretical models and end with the current theoretical models most widely mentioned in the literature, and how the conventionalization of informal learning models served to inform this investigation of parents and informal learning of special education.

**Model of informal learning: Marsick and Watkins.** An early theoretical model, titled *Marsick and Watkins Model of Informal and Incidental Learning* (Marsick & Watkins, 1990), informed workplace and organizational learning to differentiate informal learning from more formal learning. Based on a core premise promoted by Lewin (1951) that individual behavior is a function of the individual’s interaction with their environment (Conlon, 2004), this model capitalizes on the interactive value of multiple modes of learning. The model promotes that workplace learning grows from a social contract among individuals who work together to achieve collective goals such as problem definition, problem-solving, and reflection. It focuses
on individual learning that is not subject to design and control by trainers and advocates the power of work and organization contexts.

Borrowing assumptions from Dewey’s scientific method of problem-solving in everyday life, this framework includes both informal and incidental learning dimensions and conceptualizes informal learning as learning predominantly through experiential or noninstitutionalized aspects, and incidental learning as unintentional or a byproduct of another activity (Marsick & Watkins, 1990). The original framework assumed that individuals learn from their experiences when faced with new challenges and or problems. Early model conceptualization of the Marsick and Watkins Model (1990) conveyed that the context or situation triggered responses and actions to rectify the problem which included an evaluation of the results. It specified a simple type or single-loop reflection on actions used for learning, was one-dimensional, and the 1990 framework did not call for a deeper level of critical thought (Argyris & Schön’s, 1978). Following more research and application of the 1990 model, a multi-dimensional approach with double-loop reflection explained more clearly the learning taking place, rather than the linear and restrictive early conceptualization of learning (e.g., single-loop reflection and problem-solving). Additionally, the application of the first framework overemphasized cognitive learning and ignored the individuals’ emotions and feelings (Watkins & Marsick, 1997) and as a result, an affective aspect updated the earlier 1990 model.

Watkins and Marsick's 1997 model, therefore, offered a revised framework to inform this study on parents' informal learning. The 1997 model provided a conceptualization of double loop learning and a way to describe how parents may come to reflect on their underlying values, beliefs, and assumptions. It supplied a model to describe parents’ insights into their learning as they experience emotional responses to reports of their child’s urgent educational needs, lack of
educational programming, and violations to special education protections for their child. This model provided a way to analyze parents' perspectives when parents were in unexpected or challenging situations at school meetings, when weighing education options, or when problem-solving or making important decisions about their child's well-being. With double-loop reflection (Watkins & Marsick, 1997) the model added steps such as observation and reflection throughout various phases and conveyed the variations in the learning process when individuals found themselves in different emotional and social interaction situations. The re-conceptualized 1997 Marsick and Watkins' model included critical reflections on actions, beliefs, values, and assumptions, as well as contextual factors, unintended outcomes, and how the learner shaped actions that influenced outcomes. This revised model, helped to explain how parents, too, may reflect on assumptions they make with others, how they revise thoughts, and take new steps to address challenges (Marsick & Watkins, 1999).

A notable revision in the 1997 *Marsick and Watkins Model of Informal and Incidental Learning* was the representation of rapidly shifting environments of daily life (Cseh, Watkins, & Marsick, 1999). Context shapes how the individual sees their world and so frames their critical incidents/reflections and learning experiences. In addition to context, the *Re-Conceptualized Informal and Incidental Learning Model* (1999) illustrates how understanding comes from interactions among individuals and their environments or contexts (Cseh, Watkins, & Marsick, 1999). It explains the learning by individuals in larger settings, such as in groups, communities of practice, organizations, and society. Additionally, context is a macro-level trigger of critical incidents, or the trigger influencing all aspects of learning event, and acts as a barrier in finding solutions to their problem or sometimes as offering potential opportunities (Cseh, Watkins, & Marsick, 1999).
Informal and incidental learning. Theorists and researchers completed a literature review to inform the field on current conceptual constructs, analyze existing constructs, and find answers to research questions centering on informal learning (Marsick, Watkins, Callahan, and Volpe, 2008). Three themes supplied insights and contributions to the existing work on informal and incidental learning (Cseh et al. 1999): assumptions of tacit or implicit knowledge, whole person learning, and communities of practice.

Looking at tacit learning, also called implicit knowing, helps to explain learning and constructs of mental, emotional, and interpersonal assumptions to process all experience into knowledge within an informal setting. Constructs of mental, emotional, and interpersonal assumptions include unlearning and new learning. Parents put the well-being of their children in the care of teachers for several hours each school day. Each year, their child may go to a different building or attend a program in unfamiliar settings or circumstances and parents must learn the culture and rules couched in the everyday workings of the educational program. There may be a need to unlearn certain expectations or values expressed by one teacher one school year, then accept or learn new patterns of teacher behavior the next year. From one extreme, these constructs include implicit learning and tacit learning equating to the fundamental, even primitive, inputs that might by-pass conscious thought altogether, to the other extreme whereby abstractions allow human beings unconsciously to negotiate complex, rule-governed signals from the environment (Reber, 1989). Parents may use tacit or implicit learning or the fundamental, even primitive, inputs to make judgments and decisions automatically, thus by-passing conscious thought. They may sense the subtle, implied changes and negotiate to solve a problem or a serious education situation or they may make adjustments effortlessly, with a give and take or back and forth, when discussing or determining a solution with the teacher for their
child. Parents can learn the unspoken or implied social rules. However, the implicit social
mores, communication methods, or hidden rules or abstractions can easily confuse and frustrate
parents and become a barrier to communication affecting the exchange of productive ideas and
discussions. Abstractions can bombard learners simultaneously and contradictorily. This
bombardment includes the recognition of the role attitudes have in implicit learning (Argyris &
Shön, 1996) and the mechanisms of action science, and acknowledges that implicit learning is
more robust and more durable than explicitly mastered skills and beliefs.

The second area, whole person learning (Yorks & Kasl, 2002), integrates feelings and
emotions into the cognitive design of the informal/incidental learning framework (Marsick &
Watkins, 1990). Parents know their child better than anyone, and when interacting with
educators, they may sense that an educator may have a valid or hidden motive in asking
questions about their son or daughter’s behavior, for example. The parent may have an
immediate positive or negative emotional response to the questions. The parent may reflect later
the conversation, analyzing the exchange more deeply, and determine contextual factors, which
may have led to a premature suspicion of the educator’s intent. This whole person learning
example makes it possible to explain how feelings and emotions are essential components of
learning. In this example, tacit/implicit learning is taking place through presentational knowing,
such that dramatic, participatory, aesthetic/visual, and experience-based formats convey intuition
and tacit knowledge in ways that are absent from more traditional, overly analytic forms of
learning.

The third area is the work completed on communities of practice (Wenger, 1998). While
typically used for understanding workplace relationships, three factors: imagination,
engagement, and alignment, enhance the understanding of social reflective learning (Wenger,
Parents meet informally in different contexts, discuss special education policies and procedures, and may compare their children's services. They may discuss the effectiveness of their child's program or compare their child’s educational supports or the services their child might still need. Communities of practice concepts helps to explain how parents become a support to one another through the imagination of other’s situations, through ongoing engagement on preferred topics, and aligning their thoughts and beliefs with other parents to enhance their understanding of special education policies and practices for greater understanding. These exchanges help parents broaden their perspectives through social reflective learning. Imagination, engagement, alignment of conventional thinking, and reflective learning add to previous informal and incidental learning constructs. Social reflective learning provides respect for the challenges that occur when viewpoints differ. Social reflective learning also provides an understanding of how valuing differences enriches social learning and provides a deepened appreciation of the social context for learning.

From the review of tacit/implicit learning, whole-person learning, and communities of practice, (Marsick et al., 2008) a revised informal and incidental learning framework reflects a progression, from incidental learning through informal learning to self-directed learning as intention, reflection, awareness, and accessibility increase, and the progression indicates a spiraling rather than a linear process at the individual learning level. Whole-person learning (York & Kasl, 2002) contributes to the discussion by emphasizing the role of affect in both informal and incidental learning, and communities of practice (Wenger, 1998) contribute as individuals interact around shared interests, support, structure, and incentives.

Marsick and Watkins (2014) continued to analyze the 1999 model finding gaps (Cseh, Watkins, & Marsick, 1999). They noted that there were sources of error that were occurring
during informal and incidental learning analysis due to the lack of facilitation and feedback represented previously (Marsick et al., 2015) and they felt that informal learning represented in earlier models focused primarily on the individual learner. Refocusing on learning through challenging experiences, through interactions, and through solving organizational problems, more contemporary reconceptualization now includes the power of social learning embedded in social interaction as meaning-making and an integral aspect of problem-solving. Scholars are also concerned about how technology has affected informal learning as its use extends the means available to learning as a self-directed learner. The use of technology demands critical thinking and evaluation of its utility in everyday implementation. Consequently, Marsick and Watkins suggested a new heuristic to represent and reflect the influences of social learning and technology (Marsick & Watkins, 2015; Watkins, Marsick, Wofford, & Ellinger, 2018).

**Model of informal learning: Schugurensky.** Another prominent model, Schugurensky’s Tri-part Typology (2000), categorized informal learning to minimize conceptual confusion in the field of adult education, as the concept was determined to be too broad and conflated. Schugurensky’s model classifies the main elements of intentionality and consciousness and proposes three internal categories of informal learning: self-directed, which is intentional and conscious; incidental learning, which is unintentional but conscious; and tacit learning or learning through socialization, which is unintentional and unconscious. There is also an emphasizes on defining terms: informal learning vs. informal education. The model specifies that there are no educational institutions, authorized instructors, or prescribed curricula involved in informal learning as mentioned in earlier sections. Subtypes conceptualized self-directed, incidental, and tacit/implicit, set the framework, and defined the dimensions of intent and consciousness of the learner (Seger, 1994; Reber, 1989).
Schugurensky’s (2000) taxonomy outlines self-directed learning as learning projects like those described in early investigations on informal learning projects (Tough 1971; 1979). The taxonomy focused on self-directed learning and described learning as alone or as part of a group. The learning can take place with the assistance of a facilitator, instructor, or educator, and is both intentional, in that the learner has the purpose or intent to learn something even before they begin the project, or the learning can be self-directed and conscious, as the individual is aware that they are learning as they proceed. Schugurensky, referred to incidental learning as learning experiences that are unintentional but conscious. The individual does not plan on learning something; however, after the experience, they become aware learning occurred. Schugurensky (2000) conceptualizes tacit learning and denotes this socialization type of informal learning as the internalization of values, attitudes, behaviors, and skills that occur during everyday life. Informal learning that is tacit is usually not conscious but can become conscious learning when the individual reflects on the conversation through internal retrospective recognition or thinking back on the discussion. Learning through socialization occurs when external prompts trigger thoughts at a later point in time and the individual consciously retrieves something through the question and answer process.

Utilizing Schugurensky’s (2000) informal learning classification of self-directed, incidental, and socialization provides the conceptual framework explaining informal learning as a process. However, this taxonomy does not explain all aspects of informal learning regarding learner interests or types of intention of learning or learner purpose, and it does not investigate informal learning of social control or social change as these are not core to this investigation. For example, using parents as the individual learner, an overview of the literature on informal and incidental learning framework conceptualization delineates multiple aspects of the informal
process of learning and offers a way to explain a wide range of parent informal learning experiences. These framework concepts provide the foundational constructs beginning with the vital role of context (Cseh, Watkins, & Marsick, 2000), and how interpretations of context influence each step of learning. Constructs also explain the way parents see their world and, consequently, frame their critical incidents/reflections and learning experiences. They also add to the understanding of learning that comes from interactions among individuals and their environments (Marsick & Watkins, 1999) and the learning by individuals in broader contexts, such as in groups, communities of practice, organizations, and society. Context plays a vital role as a significant trigger of critical incidents, or it can be a barrier or offer potential opportunities in finding solutions to their problems (Cseh, Watkins, & Marsick, 2000).

**Informal Learning Empirical Studies**

Early studies were looking to conceptualize or define informal learning on a larger scale. One of the first major studies in the U.S. surveyed 2,845 adults who reported voluntary learning activities (Johnstone & Rivera, 1965). The purpose of the study was to find the primary purpose of voluntary adult education activity. The survey had detailed questions about more formal course participation, but it also extended questioning to include whether participants had ever tried to teach themselves on their own about a topic or subject using independent study. The survey also asked participants if they were currently engaged in studies of any type. The survey found that 40% of adults indicated involvement in a learning activity at some time and 10% indicated they were currently involved in a self-learning project. Participants were twice as likely to respond that they were engaged in independent studies than education courses (Johnstone & Rivera, 1965).
Additional investigation on informal learning by Tough (1971), who explored informal learning designs that were self-directed and possessed rich experiential knowledge. Working to develop a comprehensive description of informal learning, Tough was concerned with the practical application of knowledge. Investigations included informal learning projects or approaches to learning that analyzed the learner, the role of the learner’s experience, readiness for the learner to learn, as well as orientation and motivation for learning. Studying informal learning projects as well as formal and non-formal typologies of adult learning, Tough (1971) found that a typical individual completes eight self-planned learning projects per year, totaling 700 to 800 hours per year. The length of a typical project was 100 hours, and the learning projects were primarily about increasing personal skills and knowledge. Well over two-thirds of most adults were engaged in intentional or self-directed learning efforts that occurred entirely outside of traditional adult education programs or courses. Notably, less than 1% of all learning projects were formal or completed with the intent to obtain credit.

A second study (Tough, 1979) investigated and described informal learning episodes as “a period devoted to a cluster or sequence of similar or related activities, which are not interrupted usually by other activities” (p. 6). Each episode encompassed everything the learner thought, felt, heard, and saw while completing the activity. The study defined the form of an informal learning episode by a) well-defined duration of time, b) consistency of intent, c) sameness of the activity, d) place, and e) thoughts and actions that occurred during that episode or block of time. Overall, participants reported clear and precise learning periods including transition in and out of the learning episode. Findings showed that the duration of the events ranged in length from 30 minutes to 60 minutes but could be slightly shorter or longer. Tough analyzed the learning event by the type of knowledge and skill required and by the form of
learning episode retention and motivation. Findings determined that the overall intent for the informal learning episode was for the learner to gain and retain specific complete knowledge and skill.

Still moving forward chronologically, another study, investigating informal learning among adults in the U.S. sampled 1,501 adults (Penland, 1979). This study corroborated earlier findings in that most respondents reported themselves as informal learners. This study asked adults to think about significant learning activities that focused on gaining and keeping knowledge or skills. Of the surveyed respondents, 18 years old or older, 76% reported they were in self-planned or formal courses and said 514 total hours per year dedicated to informal learning. Additionally, over ¾ of respondents had planned a learning project on their own and of the areas of study, personal development and home and family ranked highest in popularity followed by hobbies and recreation, general education, job, religion, voluntary activities, public affairs, and agriculture or technology.

Research at this point had identified the frequency, duration, and planning aspects of learning projects, which provided only cursory information to the conceptual, theoretical, or methodological base set down originally by Tough (1971), but additional research was needed to investigate other constructs of informal learning. It was necessary to look at how individuals meet with barriers to their learning, what resources affect the process, and what kinds of help would most benefit learners (Mocker & Spear, 1982). To expand on survey investigations, Tough (1979) began to look at motivation as a construct to better understand the informal learning process. Four studies, including work on motivation, were added to the first survey focused on work: learning project origins (Moorcraft, 1975), the steps in planning (Morris, 1997), and understanding helpers or resources for self-planning learners (Luikart, 1975). In
addition to these works, Tough (1978) suggested that there was a need for further research into significant intentional changes in adults’ lives, beyond just learning projects, and additional investigation into what motivates people to spend 100 hours on informal learning. It was ten years until the administration of a Canadian survey called New Approaches for Lifelong Learning (NALL) in 1998.

The NALL study (1998) initiated a resurgence in the study of informal learning sampling 1,562 Canadian adults over the age of 18 who spoke English and French. Looking at the basic types of both learning and work, it placed a focus on informal learning and social background factors. The telephone interview design intended to elicit self-reflection on a wide range of informal learning and explicitly included social networks of learning. The NALL study was also the first study to include technology questions. Findings revealed more than 95% of adult learners participated in informal learning and engaged in self-directed informal learning activities for an average of 15 hours per week, or 750 total hours per year (Livingstone, 1999). Learning types included the categorizations of employment (e.g., computer skills), community volunteers (e.g., communication skills), household work (e.g., renovation and cooking), and other general interests (e.g., health). Most significantly, this survey contradicted the long-standing, adult learning assumption that the primary method of adult learning was through more formal learning methods. It also confirmed that adult learning was like an iceberg, with most formal methods visible at the surface, but with immense invisible submerged informal aspects (Livingstone, 1999). Therefore, most respondents reported high rates of learning outside of formal courses or workshops, thus, exposing the overlooked segment of adults learning informally.
Another large-scale, Canadian survey revisited the concept of informal learning iceberg (Livingstone, 2001). Findings indicated that the typical learner conducted at least five distinct learning projects in one year learned five separate areas of knowledge and skill, and spent, on average, 100 hours per week per learning effort, which totaled 500 hours per year. Additional findings were that informal learning was any activity that involved the pursuit of understanding, knowledge, or skill, which occurred without the presence of externally imposed curricular criteria. It revealed the distribution of informal learning across the adult population, the impact of informal learning on individuals and their performance, and the relationship of informal learning to formal skill development. Moreover, intentional, or social learning, was engaged either individually or collectively without direct reliance on a teacher. The study also reviewed relevant empirical literature on the extent, role, and outcomes of informal learning and theorized linkages between informal and formal methods of learning. Lastly, it offered a critical assessment of current research approaches to study informal learning and found policy-relevant knowledge gaps concerning the general level and nature of informal learning. Recommendations informed optimal approaches for future research on informal learning practices with emphasis on continued survey research in Canada.

Additional large-scale studies included: a) Livingstone, Hart, and Davie (1996) with 1,000 respondents, found 86% of adults surveyed indicated a total of 600 total hours of informal learning per year; b) Statistics, Canada (1998) with 10,749 adults, found 95% of informal learners averaged 230 total hours per year; c) Livingstone, Hart, Davie (1998) with 1,007 adults, found 88% of adults averaged 750 total hours per year; and d) Livingstone, Hart, and Davie (2000) with 1,002 adults and found that 86% of respondents reported 650 total hours per week of informal learning activities. Studies on informal learning in the workplace began to evolve and
became a new context for the investigation of informal learning starting with National Center Education Studies (NCES) in 2001.

**Summary of Informal Learning**

Pervasive investigations and consistent findings have led to expanded perspectives, definitions, and concepts of informal learning. Early studies of adult learning projects (Johnstone & Rivera, 1961; Tough, 1971, 1979; Hiemstra, 1975; Penland 1979) had the intention of formulating theoretical constructs and broaden informal learning and self-directed learning perspectives. These studies found that most adults were intentional or self-directed in their learning efforts and that they occurred outside of institutionalized adult education programs or courses. Earlier case studies along with U.S. surveys of self-directed learning activities in the 1970s found averages of 10 hours or less per week (Livingstone 1999). The incidence of informal learning activities increased from 12 to 15 hours between 1996 and late 1998 (Livingstone, Hart, & Davie, 1999). Findings from this literature review on informal learning inform the incidence, frequency, and length of parents' informal learning efforts. Overwhelmingly, the large-scale studies found that most adults at one point or another were regularly involved in deliberate, informal learning projects.

From these informational learning projects scholars have continued to construct informal learning perspectives and which has formed the primary theoretical lens from which to guide this study. Informal learning constructs are essential to the explanation of parents' informal learning experiences and offered guidance from the underlying assumptions and foundations found in theoretical models (Marsick & Watkins, 1990; Schugurensky, 2001) reviewed. Informal learning occurs every day, and ongoing theoretical reconceptualization offers an informed understanding of how to explore parents’ informal learning and investigate relationships between
informal learning and parent involvement. Informal learning, often difficult to recognize, occurs naturally (Mariotti, 1999) and is difficult to standardize, systematize, and assess (Dale & Bell, 1999). Informal learning theoretical models served as constructs from which to design the investigation as parents learn informally in different contexts. Parents' informal learning experiences occurred across a multitude of contexts as parents learned alone and with others, online and through face-to-face meetings, and despite having a strong desire to acquire knowledge and skills (Neeley-Barnes, Graff, Roberts, Hall & Hankins, 2013), they are at risk of learning through miscommunication or sensationalized information that is not grounded in evidence. Informal learning accounts for a wide variety of contexts and situations; however, it does not account for all aspects of social conditions. Next there will be a discussion of the second theoretical framework that informs this study, social cognition theory, beginning with historical origins and core assumptions.

**Social Cognition Theory**

To provide a reasoned and sensible explanation of an entire phenomenon studied (Kuhn, 1970), there may be a need to use more than one theoretical framework or set of assumptions (Mills & Bettis, 2015; Silverman, 2001), as in the case of this study, to provide additional explanations or insights that each framework may not totally explain individually. Informal learning assumptions shared in the earlier section supplied an additional lens to view many aspects of this study and social cognition theory was the second set of constructs or assumptions that guided this study. Addressed next are the theoretical origins and primary constructs of social cognition theory.
Theoretical Origins/Major Constructs of Social Cognition Theory

Social cognitive theory or social cognition constructs originated with the work of Albert Bandura (1986, 1977, 1991). Social cognition is most concerned with how individuals make sense of social situations. Social cognition focuses on individual thought processes that intervene between observable incentives, stimuli, and responses to specific world situations (Fiske & Taylor, 1991). The major foundational aspects of social cognition are that the individual is learning through triadic reciprocal determinism (Bandura, 1977; Bandura, 1986). This triadic reciprocal determinant includes behavior, cognition/personal factors, and environmental influences. Each determinant interacts with the other bidirectionally, and controls are not always equal. Observational learning is central to this triadic process and is the core process of cognitive and social development. Four key social cognition constructs include human or personal agency in the form of intentionality and forethought, self-reactiveness, and self-reflectiveness which are detailed by major constructs in the next section illustrating how social cognition theory can help to explain the behavioral, cognitive, and social aspects of parents’ informal learning about special education.

**Personal agency/intentionality.** One of the main agentic features of personal agency is intentionality. Social cognition theorizes a set of capabilities, exercised by human agency or “acts done intentionally” (Bandura, 1997, p. 3). The power for the individual to originate actions for a given purpose is the critical feature of personal agency. Intentions center on plans of action. Rarely structured, these actions or intentions not considered in advance, supply a reality guide for the individual and keeps them moving ahead. For this study, parents act as they realize they should do something to help their child. Intentionality helps explain parents’ need to seek information.
Social cognition assumes personal agency through intentionality but also includes the social aspects of cognition. Through personal perception, or how an individual perceives or observes another person, adults learn social behaviors. They do this by observation or through modeling other's actions. Most informal learning is implicit, taken for granted, and done through social modeling (Bandura, 1986). Social modeling or modeling in social contexts provides a way to explain parents’ implicit learning. Social modeling occurs when parents are talking with other parents, family members, friends, or educators (Bandura, 1986; Candy 1991).

**Personal Agency/Forethought.** People set goals for themselves and expect the consequences of their actions; then they select courses of action that are likely to produce a desired outcome or outcomes and avoid detrimental ones (Locke & Latham, 1990). Individuals using forethought motivate and guide themselves in anticipation of future events. When this occurs over time, the actions become a perspective that gives direction, coherence, and meaning to the individual’s life (Bandura, 2001). Over time, the individual adopts courses of action that are likely to produce positive outcomes, discarding those actions that bring punishing consequences. Social cognition constructs offer that the individual also displays self-direction in the face of competing influences and does not respond only to the material or social reinforcements in the environment. In adopting personal standards, people regulate their behavior using self-evaluative outcomes. These may override or augment the influence of external support alone. For this study, forethought has application in that, as parents realize they must act with intentionality, they select courses of action to name resources that can help them in helping their child. Over time, these perspectives or standards guide them to produce meaning in their lives.
**Self-reactiveness.** Agency involves deliberative intentionality to make choices, plan courses of action, motivate and regulate the execution of the action. Self-reactiveness or self-directedness, as a major construct of social cognition, happens through self-regulatory processes of motivation, affect, and action. A set of sub-functions of self-regulatory processes include self-monitoring, performance, self-guidance using personal standards, and corrective self-reactions (Bandura, 1986). An individual determines rightness and wrongness of their conduct through self-regulatory behavior and by using moral reasoning and judgment. The individual compares their behavior to their personal standards and situational circumstances and they self-sanction their behavior (Bandura, 1991).

Self-regulation, another dominant construct of social cognition theory, occurs when an individual regulates or checks their behavior to plan self-generated outcomes as they learn from seeing others in a social context (Bandura 1977). Self-regulation refers to how people control and direct their actions or, for this study, how a parent might respond to questions or issues or try to check or regulate their emotional state. Self reactiveness through self-regulatory behavior may explain how parents respond, question, or encourage others while in problematic verbal exchanges or confusing situations.

**Self-reflectiveness.** Individuals as personal agents have the capability of self-reflectiveness. This primary construct of social cognition concerns the individual and the ability to self-examine their behavior and adjust. “The metacognitive capability to reflect upon oneself and the adequacy of one’s thoughts and actions is another distinct core human feature of agency” (Bandura, 2001, p. 10). Metacognitive capability or thinking about the thinking of self and others, provides a way for the individual to judge the correctness of their reasoning to the outcomes of their actions. It also allows the individual to reflect on the effects that others’
actions produce, what others believe, and deductions from information or knowledge gained (Bandura, 2001). Self-reflectiveness is a way to verify the correctness of what you are thinking and was an important construct to explain the phenomenon of parents’ informal learning in different contexts. For example, as parents self-reflect, they may share an outcome from a meeting. They may share the effects that others’ actions produced by reporting perceived positive or negative interactions with the school team. Parents may also reflect on the abilities of others by reporting on the abilities of school personnel and education experts, and they may reflect by sharing the beliefs of others, such as suggestions given to them by parent organizations, family, or friends. They also might report about how they have learned new information that has helped their child (Lalvani, 2012; Nowell, & Salem, 2007; Nutting et al., 2007; Nachshen & Minnes, 2005; Neeley-Barnes et al., 2010; Rodriguez et al., 2014; Zionts et al., 2003). These beliefs influence the parents' actions and play a central role in which steps or operations they choose to take, which challenges they undertake, how much effort to extend in the process, how long to persevere in the face of obstacles and failures, and whether failures are motivating or demoralizing (Bandura, 2001).

Efficacy beliefs are the foundation of human agency. Perceived self-efficacy plays a pivotal role in social cognition theory as it is relating to higher achievement and more social integration. Personal self-efficacy is how the individual controls their life results in learning, to change perspectives, and to speak up with confidence (Bandura, 1997). However, self-efficacy can also impede the motivation to act. If enhancing the motivation to act, a parent may believe they can act to solve a problem, they may be more inclined to do so and feel more committed to this decision. The use of self-efficacy has been applied to school achievement, mental and
physical health, career choice, and sociopolitical change and is a critical variable in clinical, educational, and social research (Schwarzer & Fuchs, 1996).

Social cognition assumptions include that it is more than an individual believing they can produce outcomes; it is also that they can repeat the same control and issues in other settings. As a result, the individual has a greater incentive and confidence to repeat these actions. Competence is the ability to repeat this process through mastery experience, vicarious experience, verbal persuasion, or physiological feedback (Bandura, 1977). Self-efficacy is different, therefore, from positive illusions or unrealistic optimism, as it is based on experience and does not lead to unreasonable risk-taking (Schwarzer & Fuchs, 1996). Adult learners continue to change their behavior, beliefs, values, and knowledge (Brookfield, 1986; Cranton, 1992), as well as problem solve, use reflective thought, and engage in learning through discussion (Bandura, 1986). As mentioned, self-efficacy is a fundamental construct and had many applications for this study.

**Summary of Social Cognition Theory.** Individuals have intentionality, plan through forethought, become motivated and self-regulate their behavior. They also self-reflect, examine their behavior, and adjust, gaining confidence and competence. Social cognition offers a view that the person and the environment or context are interactive and reciprocal (Bandura, 1986; Candy, 1991). These basic social cognition constructs helped to explain parents’ informal learning as they saw others, sought advice to discuss issues, and shared perspectives about what they had learned and applied to their situations. Social cognition supplied a perspective from which to explain how parents obtained more significant control over their learning, took the initiative to learn, and demonstrated an increase in intrinsic intention to repeat, apply, and sustain their learning.
Summary of Literature Review

This literature review has illuminated historical and recent literature from the fields of adult education, K-12 education, and special education to introduce the foundation for my research study on parents’ informal learning of special education. Based on this review there is a significant gap in the literature on parents of children with disabilities and their informal learning about special education. Additionally, not researched or documented is the relationship between parents' informal learning and parent involvement in special education.

A review of parent involvement literature revealed differences between general education and special education that are qualitative due to the legal/regulatory factors of special education. Research on parent involvement exposed pervasive barriers parents face to be involved in their child's special education program (e.g., physical, cultural and linguistic, and financial). The literature also revealed barriers parents face regarding learning about their child's disability, the complexities of the special education law, and specialized interventions that are necessary for their child to succeed in school.

Primarily, what was most alarming is that there remains little focus on how parents are learning incidentally (Schugurensky, 2001) in the adult education literature. There was a significant gap in research investigating how parents are learning informally through self-directed investigation, with others or through social contexts. There was a substantial gap in the adult education literature about parents' informal learning, particularly how parents are learning by discussing, reflecting, and adjusting their perspectives, knowledge, and skills (Marsick, Watkins, Callahan, & Volpe, 2006). Concomitantly, there was little research in the special education field that looks at parents learning about special education in their everyday...
experiences and what relationships these informal learning experiences have on their involvement in their child’s special education program.

There was a wealth of empirical research on specific parent training by disability category and for more formal or structured training; however, generalizing these training benefits is not always possible for a larger parent population application and there was little discussion of informal learning practices as a component of these more formal training practices. The adult education literature reviewed on informal online learning practices was scant, revealed access and skill barriers and revealed little information specifically about parents use of online learning as an informal way to learn.

Based on the historical, conceptual, and empirical literature discussed in this chapter, parents of children receiving special education services have a need and ardent desire to learn more about special education. Parents’ readiness to learn is high, and there is an expectation of learning (Lovell, 1980). Parents strive to be involved and stay involved in their child’s educational program, but to do so, they must learn and stay informed about the complexities of special education to be able to contribute in the educational processes to benefit their children.

Informal learning conceptual models and social cognition theoretical constructs helped in studying how adults learn informally in different contexts through observation, processing, reflecting, problem-solving, and applying information in social contexts during their everyday lives. However, the studies included in this review did not investigate how parents of children receiving special education services learn informally through self-directed, incidental, or social interactions. Additionally, there was scant literature found that probed parents’ learning through reflection (Bandura, 2001; Schön, 1983) or modeling through interaction with others (Bandura,
Additionally, there was a significant gap in the literature and understanding of how parents learn about special education informally throughout their daily lives.

**Implications for Adult Education and Researchers**

There is a need for additional research on parents informal learning particularly for parents who have children with disabilities. More study would expand current adult informal learning by adding parent perspectives and contribute to a more informed understanding of everyday learning by parents, especially parents with children with disabilities. There are also implications for research in adult education and special education to inform current parent education and training practices. There is a need for research in the areas of both adult education and special education to inform more comprehensive and qualitative parent access to information (e.g., via technology) in addition to regulatory requirements. As well as how to reduce pervasive barriers to parent learning and increase inclusive and responsive help for parents to promote the role of the parent as a contributor and full member of the education team.

This chapter provided a summary and analysis of the related literature providing more specific support for this study and identifying the gap in research that exists. Next, Chapter Three details the explanation and rationale for the methodology chosen for this study, including data collection and analysis methods.
CHAPTER THREE

METHODOLOGY

The purpose of this research study is two-fold: a) to explore how parents learn informally about special education, and b) to investigate the relationship between parents’ informal learning and parent involvement. As purpose guides methodology, this study used a mixed methods design to explore two primary research questions. These are:

1) How do parents learn informally about special education?

2) What is the relationship between parents’ informal learning and parent involvement?

This chapter begins with an overview of the mixed methods research paradigm and includes the philosophy of science and theoretical justification to reveal a rationale for the use of mixed methods research. Next, included are, the theoretical underpinnings of both qualitative and quantitative paradigms and the ongoing debates regarding mixed methods as a research approach. Discussion of the strengths of mixed methods and the reasoning behind the support for the use of a sequential exploratory design follows. Included next is a discussion of interview questions and purposes, designs and strategies, sampling logic, and criteria for quality. Next there is an explanation of how this study conducted inquiries, specific sampling methods, and analysis techniques, and completed verification strategies to ensure trustworthiness and confirmability for both qualitative and quantitative methods. This chapter concludes with information on the background of the researcher.

Mixed Methods Research Paradigm

Mixed methods research mixes or combines qualitative and quantitative research techniques, methods, approaches, concepts, or language into a single study (Johnson & Onwuegbuzie, 2004). "The basic assumption is that the use of both qualitative and quantitative
Mixed methods, in combination, provides a better understanding of the research problem and questions than either method by itself” (Creswell, 2008, p 552). Mixed methods use a qualitative or inductive research paradigm with a post-positivist naturalistic inquiry or interpretative approach (Creswell, 1994; Guba, 1987; Guba & Lincoln, 1985). It also uses a quantitative or deductive research paradigm, with a positivist or a research paradigm that posits a single reality (Field, 2013). Given these two distinct paradigms, mixed methods research reduces the impact of the inherent biases and weaknesses and draws on the strengths of both qualitative and quantitative approaches. In doing so, mixed method research captures a broader understanding of the entire research phenomenon than either type by itself. When the researcher combines qualitative and quantitative data, there is a compelling mix (Miles & Huberman, 1994) and the researcher can develop a complex picture of a social phenomenon (Greene & Caracelli, 1997).

Mixed methods research does not associate with one single paradigm or epistemology. It focuses on what works best regarding the specific research questions under investigation (Tashakkori & Teddlie, 2003a) and solves problems using both words and numbers when conducting this combination of inductive and deductive inquiry. In doing so, findings corroborate through triangulation to capture a more complete, holistic, and contextual portrayal of the unit(s) under study (Denzin, 1978; Jick, 1979). Although this methodology has many advantages and despite the growing interest and positive reasons stated, mixed methods research and its underlying assumptions, applicability, and validity remain a source of debate among researchers. These foundational elements underlie mixed methods research design activity but continue to be a source of concern among researchers (Doyle, Brady & Byrne, 2009; Yilmaz, 2013). The next section will share some of those documented concerns.
Mixed Methods Debates

Mixed methods research, although not a particularly novel approach, has experienced a resurgence in recent years in behavioral sciences, sociology, and education (Pearce, 2012). However, differing philosophies over mixed methods as a valid research design and concerns about mixed methods and its non-traditional data collection and analysis process persist. Just as researchers throughout the 20th Century engaged in impassioned debates deliberating their epistemological stance on qualitative versus quantitative research (Bryman, 1984; Denzin, 1989, Sieber, 1973), national debates of epistemological preferences exist and have triggered a polarization between not only qualitative or quantitative research approaches, but also mixed methods design as a valid research method (Hanson, 2008).

One of the first challenges in the ongoing and pervasive debates between qualitative and quantitative research stems from the longstanding discussions over the foundations of inquiry. The research paradigm selected influences the question(s) the researcher poses and the methods they use to answer those questions (Hanson et al., 2005). Those who use a qualitative research paradigm or post-positivist naturalistic inquiry are interested in an interpretative approach (Creswell, 1994; Guba, 1987; Guba & Lincoln, 1985). The researcher is interested in exploring multiple realities and finding different interpretations that come from the meaning expressed through words. The researcher who is interested in an approach that examines the relationships between variables by collecting and analyzing numeric data expressed in numbers or scores is interested in a quantitative approach (Clark & Ivankova, 2016). This approach involves identifying causal relationships using objective measurement and quantitative analysis. These appear to be contradicting epistemological and ontological worldviews.
A second debate regarding the acceptance of mixed methods research centers around the position of the researcher. The researcher who uses qualitative approaches is central to the research process and serves as the instrument of the research collection. The researcher explores multiple views or realities, usually from smaller samples, to uncover or illuminate participants’ experiences regarding the specific topic of inquiry (Guba, 1987). Immersed in the research, the researcher, by design, has an emic, or insider’s point of view. Positivists, however, view qualitative research as having a stronger likelihood of subjectivity. In contrast, the researcher who is interested in quantitative approaches collects larger samples of data to test the hypotheses posed making every effort to stay independent of data collection. Every attempt is made to have the researcher separate or removed from data collection to avoid bias in the research process (Field, 2013) and proponents of positivism share a stance that the values of the researcher do not bias quantitative research outcomes as in qualitative research.

Howe (1988), in response, shared that with this simplistic view there is an attempt to eliminate all bias and in doing so the research outcomes do not capture the essence or true intent or context of the study. Moreover, there is more significant potential for more deceptive bias as no research endeavor is without the possibility of value judgments. Morgan (2007, 2014) offered that to resolve this bias argument it is preferable to view qualitative research as an inductive process and quantitative research as a deductive endeavor and that both qualitative and quantitative research present with their specific strengths and challenges. As mixed methods research uses both qualitative and quantitative research, debates continue as to how to reconcile these two opposing bias stances.

Debates and discussions are also pervasive regarding the mixed method approach and compatibility, particularly in how to combine qualitative and quantitative methods and to
integrate the data. As mentioned, traditionalist researchers argue that qualitative and quantitative paradigms are in opposition to one another and a combination of the two is not possible (Sandelowski, 2000), leading to a methodological polarization. However, those who have continued to use mixed methods research believe that in the principles of inter-subjectivity or the interplay between objective and subjective stances. The mixed method approach promotes the abduction, or combining, of both inductive and deductive theory building and the possible transferability, or inferring the reach, of various findings (Morgan, 2007). Pragmatism has, therefore, emerged and promoted a separate or third paradigm guided by philosophical assumptions that allow the researcher to mix the qualitative and quantitative approaches.

This third research paradigm provides another option for the researcher to select to addresses the research questions (Johnson & Onwuegbuzie, 2004), making the research outcome more important than the process (Tashakkori & Teddlie, 2003a). Using both inductive and deductive approaches and the integration of data through abduction, the researcher using mixed methods can capture the essence of the research while also allowing for the generalizability of findings (Morgan, 2007). As more researchers see the value in collecting both qualitative and quantitative data in a connected manner, further evolution of this third, pragmatic paradigm is likely. In response to these differences, there is a call for less conflictual discourse and a more compatible approach between various theoretical, methodological, and interpretive streams of research (Pearce, 2012).

**Rationale for a Mixed Methods Research Design**

Mixed methods research has evolved over the past 20 years as a third research philosophical model. Based on pragmatism, mixed methods research is compatible with both constructivism and post-positivism (Howe, 1988; Maxcy, 2003; Morgan, 2007; Tashakkori &
Teddlie, 1998). This research model simultaneously addresses a range of exploratory and confirmatory questions when both qualitative, and quantitative approaches are strategically combined. For this study, I am interested in gathering multiple perspectives of parents\' informal learning of special education. Mixed methods research provides the ability to answer practical questions that neither qualitative nor quantitative methods can answer individually (Teddlie & Tashakkori, 2009).

When studied through an inductive process, gathering a deep understanding of various aspects and dimensions of parent learning experiences is possible. Data gathered and analyzed through an inductive process has the potential to reveal relationships between parent learning practices and parent involvement activities connected with the special education process. Additionally, mixed methods research can potentially gather a greater depth and breadth of data to understand practical research questions more broadly. The corroboration of data, through triangulation, provides a way to capture a more complete, holistic, and contextual portrayal of the unit(s) under study (Denzin, 1978; Jick, 1979). Findings, however, can also be divergent if qualitative and quantitative findings are diverse or in conflict (Teddlie & Tashakkori, 2003). Divergent findings could lead to new theoretical insights and lead to the creation of new hypotheses (Creswell, 2015). In either case, a mixed method design allows for discoveries and provides an opportunity to capture the strengths and reduce the weaknesses of qualitative and quantitative methods separately.

Mixed methods research design is not better, more superior in design, or even more efficient than individually selected qualitative or quantitative methods. Mixed methods design provides not only a way to complement the strengths of a single study design but it offers a way to test findings from exploration and to generalize qualitative findings to a larger population.
Mixed methods provide more evidence to study a problem when a variety of data collection tools are employed, to address questions at different levels, and to explore and extended options to the separate inductive interpretations and deductive study (Creswell, 2009; Teddlie & Tashakkori, 2009). However, it is necessary to review and discuss promulgated mixed methods research designs considered before selection and use.

**Mixed Methods Research Designs**

To accomplish the goals of the research study, it is necessary to select from a variety of paths or ideal designs. Scholars have developed typologies to establish a common language for mixed methods research to authenticate it as a third methodological paradigm (Teddlie & Tashakkori, 2009). In addition to developed typologies, a standard graphic representation or notation system for mixed methods (Morse, 1991) illustrates the flow of the mixed method approach. In this case, an arrow symbolizes the sequence of connection between qualitative and quantitative data gathered and capital and small case letters represent the flow and priority visually. For example, QUAL $\rightarrow$ quan represents a qualitatively driven study in which the flow of the study goes from the qualitative phase to the quantitative phase with priority given to the qualitative phase. Conversely, QUAN $\rightarrow$ qual depicts the flow of the study from the quantitative phase to the qualitative phase with priority given to the quantitatively driven study (Creswell et al., 2003).

In addition to establishing graphic representation systems, specific factors and models assist the researcher in identifying the various procedures to follow when conducting mixed methods research. Next, specific criteria and factors are discussed in more depth to provide a clearer explanation of the purpose of the study followed by an explanation of the type of mixed method design selected.
**Criteria and Approaches**

Key to any research decision process is following a set of criteria that can guide and inform the design. There are four widely-accepted criteria that aid in the selection of a mixed methods research approach that most appropriately matches the purpose of the study and the resources and abilities of the researcher (Creswell, 2009). These include: a) implementation order or timing, b) priority or weighting, c) integration or mixing data, and d) theoretical perspective that guides the overall study.

Regarding implementation, it is necessary to decide the sequence and timing. The objectives of the study determine the sequence. If the study intends to collect both qualitative and quantitative data simultaneously by collecting and integrating the data simultaneously, the data collection method would dictate a concurrent strategy. If the intent is to investigate specific variables to address a hypothesis first and then seek to find a greater understanding of those variables, a qualitative phase would follow a quantitative approach. However, if the objective is to explore the nature of the problem first and then extend the findings, a qualitative phase would follow a quantitative approach.

The second criterion that guides and informs the study involves identifying the priority or weight of the types of data collection, by assigning the priority to either the qualitative or quantitative data collection, or by assigning equal weight if neither qualitative nor quantitative data collection has priority. The objectives, intent or logistics of the study determines the priority (Creswell, 2009). If the priority is to collect data and integrate the data during all phases, then all data has equal weight. If the intent is to collect specific variables to investigate, then to explain those findings, then the greater weight or emphasis is on the quantitative data collection.
If the objective is to prioritize the nature of the problem which requires exploration first, the emphasis or weight is on the qualitative data collection.

The third criterion or standard that guides the selection of the mixed methods approach includes the consideration of data integration. The research questions, philosophy, and the interpretation of data determines the point of data integration. Choices include mixing the data during the collection of data, in the analysis of data, when interpreting the data, or at all three points in the research process. Mixing data can also occur when embedding the data within a more extensive study.

The last decision point includes consideration of the theoretical perspective that guides or informs the entire design. "All researchers bring theories, frameworks, and hunches to their inquiries, and these theories may be made explicit in mixed methods study or be implicit and not mentioned" (Creswell, 2009, p. 208). Theories shared in the beginning sections of the study, provides an orientating lens that forms the questions asked, who participates in the study, how data are collected, and what the implications are for the study. The theoretical perspective also guides criteria choices of sequence, priority or weighting of the types of data collection, and priority of the integration or mixing of the data for selection of a mixed methods design.

There are six distinct types of mixed method designs for consideration prior to selecting a mixed method approach. These include three sequential: sequential explanatory, sequential exploratory, and sequential transformative; and three concurrent designs: concurrent triangulation, concurrent embedded, and concurrent transformative (Creswell, 2013). Next, the is a discussion of the rationale for the selection of a sequential exploratory design, the intent, research questions, timing, weighting and theorizing factors in greater detail that support the selection of a sequential exploratory design for this study.
Sequential Exploratory Design

A sequential exploratory mixed methods research design, QUAL→quan, chosen from the six designs mentioned previously, most appropriately matches the purpose of this study and the resources and abilities of the researcher (Creswell, 2009). A sequential exploratory design occurred across two successive phases, beginning with the qualitative phase and followed by the quantitative phase (Greene et al., 1989). The weight or emphasis was on the first, exploratory, qualitative phase. Questions or procedures for the second strand emerged from or depended on the findings from the previous strand, and research questions were related to one another and evolved as the study unfolded (Teddlie & Tashakkori, 2009).

This study explored parents’ informal learning and the relationships between informal learning and parent involvement which required a deep understanding of the parent perspective. The emphasis or priority was on collecting the qualitative data first (Glaser & Strauss, 1967) supporting this study’s intent to obtain rich narratives or data of parents’ informal learning experiences during the qualitative phase and allow for either cooberation or contradiction of parents’ insights and perspectives in the quantitative phase (Creswell, 2009). Inner-method mixing of data occurred by using an open-ended, semi-structured interview process (Wengraf, 2001) followed by a closed-ended survey developed from rich qualitative data. Importantly, this design allowed for interpreting relationships between informal learning and parent involvement from the multiple perspectives reported by parents during both phases. Qualitative and quantitative findings found that were diverse or in conflict (Teddlie & Tashakkori, 2003), had potential for new theoretical insights and the creation of new hypotheses (Creswell, 2015).

Additionally, a pragmatic theoretical perspective guided this study as the intent was to discover findings to inform and promote change. This study intended to inform adult learning
literature and practices that would be useful and assist parents. The sequential exploratory mixed methods design selected allowed for final inferences based on the evolving results of both strands of the study while always maintaining the emphasis on the inductive phase results. The pragmatic intent and the utility of the sequential exploratory design to extend the major themes via data integration therefore allowed for the generalizability of results to a larger sample of parents (Creswell, 2009; Creswell, Plano, & Clark, 2011).

There is little information about the phenomenon of parents' informal learning and its relationship to parent involvement; therefore, the sequential exploratory design best matched the primary purpose of exploring parents' views on how they learn through their everyday lives. It provided a way to explore parents' perceptions of knowledge and skills gained through everyday learning and how the new knowledge and skills shaped their understanding of the special education process and practice. The sequential exploratory design was the optimal match for this study to capture and generalize rich inductive findings to larger parent samples.

**Implementation of the Mixed Methods Design**

There were four major steps completed for implementation of the sequential exploratory design (Creswell, 2011). The design and implementation of the qualitative strand included the exploration, collection, and analysis of qualitative data, parents informal learning and involvement. The refining, mixing, and integrating of the data accomplished by interlinking the two phases which yielded a typology or set of categories that defined the framework for the survey. This data importation process (Greene, 2007) or importing mid-stream results from the analysis of one data type to the analysis of a different data type, helped to create the survey. The quantitative phase of the study which collected a new sample of parent responses about salient or
prominent first phase findings and finally the integration of both qualitative and quantitative findings to identify additional extensions from both sets of data (Creswell, 2011).

A mixed method research study required more than one sampling technique. It involved both purposive and probability, or representative sampling (Onwuegbuzie & Jiao, 2007; Tashakkori & Teddlie, 2003a). Miles and Hubermann (1994) suggest six general guidelines that a sampling strategy should use. These include: 1) stem logically from the conceptual framework as well as from the research questions addressed; 2) be able to generate a thorough scope of the type of phenomenon under study; 3) allow for the possibility of drawing clear inferences from the data and allow for credible explanations; 4) be ethical and feasible; 5) should allow the researcher to transfer or generalize the conclusions as designed; and 6) be as efficient as practical (Tashakkori & Teddlie, 2003). In response to these guidelines, the next discussion highlights both of the participant sampling and selection strategies used.

**Qualitative Participant Sampling and Selection**

The qualitative phase of the sequential exploratory design warranted the use of purposeful, or non-probability, sampling. The logic and power of purposeful sampling lie in the selection of rich samples that are most likely to produce rich information (Patton, 2002). Snowball sampling is the gradual selection process used to find instances that are representative or typical of a population of interest. It is a recruitment technique in which research participants assist the researcher in identifying potential participants. To begin the recruitment process, I identified and sent an introductory recruitment letter to each of six parent organization contacts from three Mid-Atlantic states. The recruitment information posted on organization websites or share with members, cast a wide net (Patton, 2002) to provide a of sample as many parents from different sociocultural and geographic factors as possible, I chose the Mid-Atlantic region of the
U. S. to allow for sampling of a variety of parent demographics, public education sites, and special education programs and services. The parent organizations’ primary mission was to serve and support parents of children with disabilities.

The recruitment information described the purpose and description of the study, included general information on participant and interview guidelines, the required IRB information, and my contact information. Appendix A contains a sample of the recruitment letter. Each parent organization indicated they had posted the recruitment letter publicly on Facebook, shared the recruitment information at parent meetings, or sent email messages and attached the recruitment letter to their member email lists. Parents who provided their email addresses to their organization were aware that they might receive solicitations of this nature. I then contacted parent organizations with a follow-up phone call or email message to detect if there were any additional questions or concerns. If the organization or contact requested additional information, I offered to attend a meeting to describe the study or send a flyer that had necessary recruitment details. Upon request, I emailed one information flyer to one group. There were no follow-up face-to-face recruitment meetings needed to stimulate additional parent interest. The recruitment letters, follow-up flyer, and one referral made by another participant, produced the targeted number of participants for the interview portion of this study.

Selection criteria was developed to ensure a sample of parents who would have had the opportunity to experience several types of special education parent activities and had opportunities to communicate with others included in their child's education experience. These could have included meetings with school staff as a group or individually, discussions with educators while planning educational programming, discussions with other parents, parent-to-parent informal meetings, or when completing searches for special education information.
The selection criteria for the participants were:

1) The parent is 25 years of age or older and has educational rights and responsibilities for their child who is currently receiving special education services;

2) The parent has attended individualized educational program meetings over a minimum of three school years, and who consider themselves an active member of their child’s education team;

3) The parent has participated in parent education efforts or has served as a parent resource for other parents.

There were ten participants selected for interviews. After the tenth interview, I determined the collection of data was repetitive and did not provide any added information from the previous nine interviews (Glaser & Strauss, 1967; Strauss & Corbin, 1998). Pseudonyms assigned maintained confidentiality. Table 1 on page 114 provides demographic data of interview participants selected. There were nine mothers (Barbara, Louise, Ruth, Kelli, Donna, Amy, Fran, Kristen, and Pat) and one father (George); one Asian parent, three African American/Black parents, and six White parents. Participants ranged in ages, with three parents who were 35-45 years old, six parents were 45-54 years old, and one parent was in the 55-64 range. One parent finished high school; two reported some college or a two-year degree; three had a four-year college degree, and four parents had more than a four-year degree. Participants will be discussed more in Chapter Four describing qualitative findings.
Table 1.

Demographic Data of Interview Participants (N=10)

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex</th>
<th>Age</th>
<th>Race/Ethnicity</th>
<th>Education</th>
<th>Child’s Need</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbara</td>
<td>F</td>
<td>45-54</td>
<td>White</td>
<td>&gt;4 yr. college</td>
<td>Specific Learning</td>
<td>7</td>
</tr>
<tr>
<td>Louise</td>
<td>F</td>
<td>35-44</td>
<td>White</td>
<td>Some college</td>
<td>Specific Learning</td>
<td>5</td>
</tr>
<tr>
<td>Ruth</td>
<td>F</td>
<td>45-54</td>
<td>White</td>
<td>4 yr. college</td>
<td>Specific Learning</td>
<td>5</td>
</tr>
<tr>
<td>Kelli</td>
<td>F</td>
<td>45-54</td>
<td>White</td>
<td>4 yr. college</td>
<td>Speech and Lang</td>
<td>12</td>
</tr>
<tr>
<td>Donna</td>
<td>F</td>
<td>35-44</td>
<td>Black</td>
<td>&gt;4 yr. college</td>
<td>Specific Learning</td>
<td>8</td>
</tr>
<tr>
<td>Amy</td>
<td>F</td>
<td>45-54</td>
<td>Black</td>
<td>&gt;4 yr. college</td>
<td>Autism</td>
<td>3</td>
</tr>
<tr>
<td>Frances</td>
<td>F</td>
<td>45-54</td>
<td>White</td>
<td>Some college</td>
<td>Autism</td>
<td>11</td>
</tr>
<tr>
<td>Kristen</td>
<td>F</td>
<td>45-54</td>
<td>Black</td>
<td>&gt;4 yr. college</td>
<td>Multiple</td>
<td>7</td>
</tr>
<tr>
<td>Patricia</td>
<td>F</td>
<td>55-64</td>
<td>Asian</td>
<td>4 yr. college</td>
<td>Learning/Emotional</td>
<td>10</td>
</tr>
<tr>
<td>George</td>
<td>M</td>
<td>35-44</td>
<td>White</td>
<td>High school</td>
<td>Emotional</td>
<td>10</td>
</tr>
</tbody>
</table>

Gender, age, race and participant range were limited, however, final participant demographics yielded a fair sampling across child need and grade of child (Jick, 1979). Parent participants reported a range of child educational needs, including specific learning support, emotional support, multiple disabilities support, autism support, and speech and language support. The 13 eligibility categories (categories that indicate eligibility for services under IDEA) were not represented, however, of the categories represented in this sample, it is representative of approximately 70% of the total students that received services under IDEA for the school-year 2015-2016 (NCES, 2017). There were multiple types of placement options also shared during interviews including: general education, classrooms designed to provide a range of intensive services and supports to children in the autism spectrum, multiple disabilities and
emotional needs in the child’s neighborhood school and specialized programs that were offered in the district but not in the child's neighborhood school building. Not requested were the participants’ personal or household income ranges; however, most mentioned their financial situations and employment status during their interviews. These ranged from, Federal employee, professional consulting, personal business owner, tutoring service provider and tutoring program owner, state worker, food service employee, entrepreneur, non-profit grant writer, volunteer services provider, preschool aide. During the interview discussions, parents volunteered descriptions of their child’s school size and location, therefore confirming four urban, four suburban, and two rural settings as mentioned previously.

**Qualitative Data Collection**

The qualitative phase collected parent response data from ten semi-structured parent interviews (Creswell, 2013; Patton, 2014; Miles, Huberman & Saldana, 2014; Morse, 1994) with one parent from each family. Eight of the interviews ranged from 60 to 90 minutes in length, and two interviews lasted 20-30 minutes longer. A general list of questions guided the semi-structured interview that inquired about their child, learning about special education and the IEP process, and parent involvement in special educational processes and practices. During interviews, parents provided additional detail or clarification of responses when necessary (Merriam, 2009). A complete list of interview questions is in Appendix B. A few sample questions include:

a) Tell me about your child who receives services and what is unique and wonderful about him/her.

b) When your child was experiencing difficulties in school, what were some of your thoughts at that time?
c) What did you do or what actions did you take. Can you provide some examples?

d) What were some of the ways you began to learn more about special education as it relates to your child’s strengths and needs?

e) Why did you use these resources?

f) Tell me about your current involvement with your child’s teacher(s)/educational team. What can you tell me about these experiences?

g) How has accessing parent resources impacted your involvement with your child’s education team?

h) Tell me about any opportunities you may have had to inform, discuss or educate other parents or teachers about special education? Did you serve as a contact for them? If so, how did you continue to learn through this process?

As the semi-structured interview strategy allows for deeper questioning and follow up (Creswell, 2009), the questions triggered parents to share additional relevant personal information about their families, economic situations, as well as deeper insights into raising a child with disabilities. I made every effort to remain generally supportive when my opinions were requested, and every attempt was made to provide empathetic responses to the range of the sometimes-passionate feelings and emotions that arose spontaneously during the interview process.

Before beginning the interview, I provided the participant with a consent form that explained the interview procedures and protections and obtained verbal and signed permission from each participant and answered any questions they had. After the interview, I reviewed the notes for completion, and also asked the parents to review the notes for clarification before completing the interview session. All confidential notes from interviews were transcribed.
shortly after each interview along with any supporting documents parents voluntarily shared to illustrate their viewpoints or explain responses. Chapter Four will describe data and findings from the interviews. Discussed next are emerging themes that informed the development of a survey instrument. Chapter Five will also provide additional detail and discussion.

**Qualitative Data Analysis**

Analysis of qualitative data began by transcribing the interviews and examining the interview texts (Denzin & Lincoln, 1984; Miles & Huberman, 1994). To ensure accuracy, all transcribed data files were compared with recorded parent responses. Thematic analysis through text mining helped to locate poignant responses to questions to ensure focus was on the purpose of this study. A constant comparative method (Maxwell, 2013) provided a process for analysis of each of the parent transcriptions to compare and code responses by instances and category. To get a general sense of response patterns, general comments recorded in the margins helped to compare one segment of data with another segment of data and determine similarities and differences (Glaser & Strauss, 1967). Using the constant comparative process, I repeatedly compared the specific responses with the previous responses coded in that same category to maximize between-theme variations and minimize within-theme variations (Glaser, 1965).

I then downloaded the parent data files into NVIVO 12 software, a tool for qualitative data analysis and coding organization, helped prevent errors or loss of data in analysis and provided additional objectiveness in the analysis process. Appendix C provides the NVIVO 12 thematic organization. I then systematically went through each file again, considering and selecting data from the parent files that illuminated or represented key ideas about their learning experiences and any comments on how these may link to parent involvement. This iterative process ensured that I could capture and identify patterns, represented as central nodes and
subnodes in NVIVO 12. This coding process took several repetitions and many categorizing adjustments. Additionally, I reviewed the data through the lens of the theoretical constructs of informal learning and social cognition. Data was recategorized, collapsed, or deleted as redundant. I repeated this constant comparative process several times, winnowing data until I was able to determine patterns illuminated through the analysis process. I found three main themes. Chapter Four provides the three main themes and an explanation of overall qualitative findings. The next sections will provide descriptions of the quantitative phase of this mixed methods study beginning with a description and rationale for quantitative sampling procedures and selection of participants.

**Quantitative Sampling**

Probability sampling, specifically simple random sampling captured a larger number of cases representative of the population of interest (Teddlie & Tashakkori, 2009). Seven parent groups or parent organizations from the Mid-Atlantic region of the U.S. selected for sampling, received a recruitment letter. The simple random sampling process was ideal as it was impractical to sample all parents who have a child with a disability (Babbie, 2007). This type of sampling process offered the best likelihood of gathering a determinable sample by contacting parents from a range of parent organizations and sending recruitment information out randomly to the parents of the total population of parents of those groups (Tashakkori & Teddlie, 2003a). Each parent from the parent organizations had an equal probability of participating.

In keeping with sequential mixed methods design, I used the same inclusion criteria as the smaller first phase sample. Both quantitative and qualitative samples were parallel in that they both required similar inclusion criterion for age, educational rights and responsibilities, and allowed for a reasonable expectation of having similar parent involvement and parent learning
opportunities. I set the minimum number of years for a parent to have a child receiving special education services at three years. This would identify parents for the larger quantitative sample that had a similar number of years to experience special education learning and involvement opportunities. Additionally, it increased the likelihood that the parent sample would have met with their education team several times and would have had a minimum amount of time to develop rich perspectives and viewpoints about special education and parent involvement as the parents selected in the qualitative sample. Therefore, to obtain potentially generalizable findings (external validity) or to extrapolate findings from a subset of a population of parents (parents from parent groups or organizations), I used simple random sampling, the same inclusion criteria for the second phase and yielded a representative sample to provide answers to questions asked (population validity).

Therefore, to remind, selection conditions for the quantitative phase that matched those used for the qualitative phase which included: 1) the parent is 25 years or older and has educational rights and responsibilities for their child who is currently receiving special education services; 2) the parent has attended individualized educational program meetings over a minimum of three school years, and for whom consider themselves an active member of their child’s education team; 3) the parent has contributed to parent education efforts, are a member of a parent organization, or have been identified by others as a parent resource for others.

To recruit the sample, I sent an introductory email to the organization lead or point of contact and followed up with a phone call to make sure they received the email and if they had any concerns or questions. The recruitment letter included the study title, the purpose, and intent of the study, the inclusion criteria, IRB identification information, and all contact details for any questions. All organizations that I approached agreed to forward all information sending it
randomly to their parent members. Parent organization membership varied greatly. By using a point of contact for each of the parent organizations the number of recruitment emails forwarded to members is indeterminable and therefore the percentage of responses is unknown.

Organizations served heterogeneous disability types, or they represented specific disability categories. One group reported hundreds of parents while another reported in the low 30s or 40s. One organization lead asked for permission to forward the recruitment information on to other parent organization lead.

**Survey development.** The fundamental purpose of survey research in the quantitative phase of a mixed method design, is to extend qualitative data through confirmatory or contradictory findings so that findings may or may not be able to be generalized to a larger parent population (Babbie, 1979). The survey was available for a total of four weeks, however, once a parent started the survey, they had to complete the survey in one week. This prevented parents from inadvertently starting another survey if they had not completed the survey within the one-week period and ensured only one submitted survey per participant. Questions were Likert scale closed-ended questions. Some examples of open-ended questions included: 1) when I first noticed my child was struggling in school, I relied primarily on my child's school to inform me about what my child's difficulties might be; 2) When I want to learn more about special education (disabilities, assessments, interventions, parental rights, or procedures) I look for other parents to meet with me face to face to talk about special education questions I have; 3) When I contribute new information about my child's program (at IEP meeting), I develop different insights, perspectives, viewpoints about the team's openness to discussing my information; 4) When I ask detailed questions about special education evaluations, assessments, interventions at the IEP meeting, I learn about my child’s IEP team and their willingness to address my concern;
5) Over the school years, I have learned that I often share special education information with other parents who have had similar experiences. Appendix D contains a listing of all survey questions. There was a total of 47 close-ended questions and eight demographic questions related to the parent and their child. Demographic questions included: 1) gender; 2) household income; 3) ethnicity/race; 4) age range of parent; 5) parent’s highest education diploma/degree; 6) Child’s primary area of need; 7) Child’s primary type of education support; 8) child’s grade level in school. An open-ended comment section allowed parents to add comments or additional clarifying information. Before distributing the live survey, five parents who represented the target participation group previously identified, completed the survey. Pilot survey feedback helped to make necessary corrections, clarify concepts, and or remove redundancies to the original survey version prior to distribution.

The Qualtrics online survey software was the platform used to design, disseminate, analyze and maintain survey results. The survey allowed for 50 different languages. These were specially selected to provide accessibility for parents who may speak a different language than English. I also used the design features for accessibility for any physical, visual or reading access needs. The opening survey screen included the same information as the recruitment letter which again included IRB and contact information. In the first survey screen, I addressed consent and participants could not proceed to the full survey until they agreed.

**Quantitative data collection.** A fundamental principle of mixed methods research specifies that the mixing of qualitative and quantitative methods results in the most accurate and complete depiction of the phenomenon under investigation (Johnson, 1995). For this study, the intent was to obtain a deeper understanding of parents’ informal learning. It was also the intent to explore the relationship between everyday learning and parent involvement. Inner-method
mixing provided a way to capture data that would converge or cooberate first phase findings. Inner-method mixing also had the potential to contradict first phase findings and eliminate, or minimize key plausible alternative explanations identified from the research data, identifying any divergent aspects of a phenomenon (Tashakkori, & Teddlie, 2003).

A survey link to Qualtrics was included in a recruitment email message. If the potential participant agreed to participate, they selected a prompt to continue. This indicated consent for the use of their survey responses for research, and as a survey ‘participant’ and counted in the Qualtrics response system. By design, a participant was not able to advance to the full survey until they indicated a ‘yes’ response to each selection criteria question. If the participant did not indicate they met all three inclusion criteria (did not answer yes to all three criteria) the participant screen was automatically advanced to the end of the survey, and the survey participant did not complete the survey.

There was a total of 229 survey attempts by potential participants during the four-week response survey window. Of the 229 participant responses, 45 parents did not meet selection criteria, and 63 parents did not finish the survey in the one-week cut off period. There was a final total of 122 total survey participants who met all inclusion criteria and completed the survey within one-week of the four-week survey window.

**Quantitative data analysis.** Sequential exploratory mixed methods data analysis occurs when the QUAL and QUAN strands of a study occur in sequential order and when the analysis from one strand emerges from or depends on the previous strand. Keeping with the design of the exploratory sequential research design, the analyses from both qualitative and quantitative phases interlinked at the point of survey question development and quantitative data analysis.
There were three ways quantitative data analysis occurred: analysis of scale reliability, confirmability factor analysis, and correlation hypothesis testing to establish construct validity. Statistical analysis completed included Chronbach’s alpha, descriptive statistics to describe the data regarding general and central tendencies, and Pearson Correlations and one way between subjects analysis of variance (ANOVA) to examine relationships (correlations) between scales and means of demographic data respectively (Field, 2013).

To maintain adequate data transformation approaches, the transformation of qualitative data (coded themes) completed by comparing transformed quantitative data scores and assigning numeric values to each response and then entering raw data into SPSS v25. To avoid inappropriate statistical analysis procedures being applied when analyzing quantized qualitative results, the distribution of scores were examined, and nonparametric and parametric statistical procedures were used (Creswell, & Plano Clark, 2011; Field, 2013). A joint display with qualitative themes and quantitative, categorical data was developed to present the integration of the data. To avoid illogical comparisons during qualitative and quantitative data analysis, quotes or specific comments were taken from qualitative data and matched to quantitative findings.

**Data Integration**

During final interpretation of both qualitative and quantitative, it was necessary to verify data for trustworthiness and believability. There was a consideration for gathering any additional data that was determined to be necessary by using the same rigorous approaches for data collection and reevaluation procedures used for data interpretation. To resolve any divergent findings, data was reanalyzed to the degree in which results could be corroborated by other confidential procedures.
Inner-method mixing or the method triangulation process was maintained so that qualitative and quantitative data collection processes were well documented and maintained (Creswell & Plano Clark, 2011; Jick, 1979). Triangulation ensured that each phase of the study was aligned for valid results so that alternative explanations for the findings were ruled out. In mixed methods, mixed data collection methods expose complementary strengths and nonoverlapping weaknesses of both qualitative and quantitative data (Tashakkori, & Teddlie, 1998). Therefore, fundamentally, I connected both convergent and divergent evidence. In Chapter Six, there is a discussion of the collection and reporting of qualitative and quantitative data, followed by the discussion of the integration of qualitative and quantitative findings and the discussion of implications.

**Verification Strategies**

When conducting research, it is essential that an ethical approach is followed so that trustworthiness occurs through a well-defined truthful process. It is essential for those who consume research be assured that the findings of an investigation are believable and trustworthy (Kvale, 1995). Trustworthiness occurs when the researcher can show the consistency across the research purposes, the questions, and the methods used (Tashakkori, & Teddlie, 2003b). Most important is that trustworthiness is related to the research design and data collection, to data analysis, and interpretation of findings (Onwuegbuzie & Johnson, 2006; Creswell, & Plano Clark, 2011).

For mixed methods research, there are standard strategies to verify trustworthiness in both the qualitative and quantitative phase as well as through a validity procedure specific to mixed methods called an inference quality process. This inference quality strategy is followed to establish credibility across the entire study (Creswell, & Plano Clark, 2007; Teddlie &
Tashakkori, 2009). However, mixed methods designs are in the early phases of standardization (Onwuegbuzie & Johnson, 2006; Tashakkori & Teddlie, 2003a; Creswell & Plano Clark, 2011) therefore, in the next section, the verification strategies used are shared individually for each of the qualitative and quantitative phases of the study.

**Qualitative Verification Strategies**

Confirmability, credibility, dependability, and transferability are in alignment with epistemologies and questions congruent with the philosophical assumptions that underlie the qualitative approach and establish the authenticity and trustworthiness of qualitative research design.

**Confirmability.** Confirmability is the degree to which the results can be confirmed or corroborated by others and the pivotal means of addressing confirmability is through an audit trail (Lincoln & Guba, 1985; Denzin, 1994). An audit trail was used to ensure rigorous and ethical methods were completed to track and maintain all data (field notes, reflexive journals, participant emails, supplemental documents, transcripts of interviews as well as survey communications) and so that all data collected were available for examination and verification. NVIVO 12 housed qualitative data, and the constant comparative data analysis process allowed for initial reading and reviewing transcription responses by instances and by category. Additionally, NVIVO 12 served as a method for organizing and storing data recordings which also assisted in maintaining the audit trail.

**Credibility.** Credibility establishes the truth value or the believability of the data. Credibility is the consistency between the participants’ perceptions and the ways in which the researcher portrays the participants’ perceptions (Mertens, 2005). In this study, the semi-structured interview format was chosen and high-quality, dense and rich data were systematically
captured and analyzed (Patton, 2002). This allowed for opportunities for immediate clarification and authenticity of responses for credibility and believability. As the primary instrument of data collection (Simpson & Merriam, 2000), I used the triangulation process to ensure participant responses gathered through more than one form of data collection, determined the plausibility of conclusions of the phenomenon. I compared the results obtained from qualitative methods directly to those obtained from quantitative methods for convergence and divergence (Greene et al., 1989). Interview data was validated, and compared against what was observed at the interview, heard via audio recording, and read in documents shared by the participant (Denzin, 1978). Member checks were also used so that data was not be misinterpreted by the researcher (Maxwell, 2005; Guba & Lincoln, 1981) and to ensure parent responses were recorded and transcribed appropriately (Merriam, 2009). This process ensured that I avoided subjectivity and error was reduced, and the credibility of data was established.

**Dependability.** Dependability is a term used in qualitative research that indicates reliability and refers to the degree to which findings are able to be replicated in other contexts or subsequent studies (Mertens, 2005). Dependable data is reliable, thorough, of high quality, and collected using rigorous and transparent methods (Creswell, 2009). To ensure that dependability was accomplished, I described and explained the world as those in the world explained it. To make sure the results of this study made sense (Lincoln & Guba, 1985) an audit trail, including a research journal, mentioned earlier, assisted in establishing dependability. For reliable data collection, organization, storage, I used functions of NVIVO 12 qualitative data analysis software. I completed an iterative process of reviewing data organized within the software and completed rounds of analysis until themes emerged.
Transferability. To view transferability in alignment with the philosophical underpinnings of qualitative research, Lincoln & Guba (1985) state transferability or the burden of proof lies less with the original investigator than with those seeking to make the transfer of the findings to another situation, since the original inquirer cannot know the sites or contexts to which transferability might be sought. Therefore, the researcher needs to provide enough description of the data to make transferability possible for other researchers. This is accomplished through rich, thick descriptions of data (Patton, 2002). For the qualitative phase, parents sampled and selected were those who were most likely to have had multiple or rich experiences as parents of a child receiving special education services. I used purposeful sample of a smaller number of parents who report detailed and rich narratives of their experiences through the semi-structured interviews to enhance the possibility that others who also work with parents could identify and draw connections to their setting (Maxwell, 2005).

Quantitative Verification Strategies

Internal threats to validity concern experimental procedures, treatments, or experiences of the participants that threaten the researcher’s ability to draw correct inferences from the data about the population being studied (Creswell, 2009). Quantitative research design investigations are explained through internal validity checks as well as rigorous data analysis and data interpretation (Babbie, 2007; Field, 2013). Rigorous instrument development ensured validity of the construction of the survey, so that the survey measured what it was designed to measure. Additionally, statistical programs and correlation analysis procedures (e.g., Pearson correlations, ANOVA) and valid statistical procedures of converting, cleaning, creating, and computing data collected were followed (Field, 2013) with dense descriptions of research methods maintained.
To ensure reliability, defined as the degree to which alternative explanations for data results can be ruled out (Krathwohl, 2004) a larger sample size (number of parents), excluding those interviewed, was obtained for survey data collection (Creswell & Plano, Clark, 2011). To ensure internal reliability, correlation analyses (i.e., Cronbach’s Alpha) of data items sufficiently reflected the construct that it is measuring. Next, is an explanation of the research ethics followed and an explanation of IRB compliance.

**Research Ethics and IRB Compliance**

To uphold research ethics and achieve IRB compliance, all criteria and guidelines set forth by The Pennsylvania State University Office of Research Protection were followed. Institutional Review Board (IRB) approval was obtained before the initiation of participant selection. Prior consent was solicited before any interviewing of participants. The process of interviewing, an introduction of the study intent and major components was shared with the participant before the start of the interview ensuring that the participant understood they had the right to decline the interview or stop the interview at any time. Interviews did not proceed if the participant was reluctant to approve for any reason and there was no coercion to begin the interview or to continue after the interview begins. The intent of the project, the process for obtaining data and any known participant risks were shared before beginning the interview. At all times, participants were reminded that their participation was voluntary, and if they should choose to end the interview, they could do at any time without repercussions. The interviews continued to the point of saturation or redundancy of samples (Lincoln & Guba, 1994). Data security was of utmost importance and was maintained and explained to all participants. The same approval documents used for the interview process in phase one were employed for phase two however they were posted as part of the initial steps of the online survey. If the prompt
indicating “consent” box was not selected or the participant selection criteria were not met, the survey was designed so that the participant would not be able to proceed. All surveys were maintained on a secure website (Qualtrics) and remained secure during analysis.

**Background of the Researcher**

In taking an interpretivist paradigmatic view, my perspective is that knowledge is constructed by the individual and that there are multiple realities and different interpretations that come from the meaning that individuals make of the world. In taking this perspective research becomes a highly subjective experience and the researcher is both involved directly with and affects the study participants. I recognize there is more than one reality and that I cannot stand outside the research as an objective observer but am active and involved in each phase of the research project, from creating the research questions, to the collection and analysis of data and interpretation of findings, and therefore acknowledging that it is impossible for the researcher to remain unbiased and separate from the research (Johnson & Onwuegbuzie, 2004).

With this acknowledgement, as the researcher for this study, it is important to be transparent about my background as well as about any potential biases relevant to this study. As a lifelong learner, special education administrator and consultant, speech-therapist, educational program administrator, and clinical administrator, I have met hundreds of parents who have expressed frustration with their school system. There have been many who have reported working collaboratively with their schools as well. As I have a particular interest in identifying educational practices or underpinnings that will help inform ways to be a more effective facilitator of more meaningful parent involvement in special education and, as I have been employed or involved with special education for much of my adult life, I have particular bias about the ways in which educational programs are conducted. Therefore, I assume that my own
educational program biases, empathy and involvement with parents and their stories has impacted my interpretation of the parents’ perspectives.

The professional choice to become a therapist and years later, an adult educator and consultant, grew out of my lived experiences as a sister of an older brother with learning difficulties who struggled mightily to be accepted by his peers and achieve educationally. Many of my questions and views stem from my experiences shared not only by the parents of my students, clients, or programs, but by my own parents who did not understand why their son struggled so significantly in school. These experiences have guided my thinking and influenced the methods and strategies I incorporated into my work with educators and families over my career. I am aware of this “insider” position, and my positional viewpoints will remain open for reconsideration and reshaping via self-reflection (Argyris, & Schön, 1974). I am aware of my subjectivity and by knowing and maintaining this level of awareness, I have made every attempt to minimize my bias and influence throughout the entire research study (Takacs, 2003, Guba & Lincoln, 1981).

Additionally, as a White, middle class female, I recognize that my perspectives and views come from a position of privilege, and that this positionality most likely affected my interpretation of the participants’ perspectives. Also, my experiences affected the level of comfort and willingness parents may have had in responding. With this knowledge, I reject the notion that there is one truth or objective reality and maintain my goal in research is to understand multiple social constructions of meaning and knowledge collected from parents (Mertens, 2005).

I also have a pragmatist view of research. I have chosen a research design that will consider the research outcome to be more important than either of the methods used or the
epistemology that underlies the method. With a “what works” view, mixed methods approach appeals to my interest in identifying findings, constructed and reported by parents for parents, with the pragmatic stance. Using mixed methods sequential exploratory design aligns with my pragmatic views, while also addressing the research questions presented in this study.

I have had the opportunity to interact with parents for many years, and they have freely shared their experiences and realities. As a researcher, I will work within the research process and serve as the instrument of the research collection. The purpose of the researcher is to explore multiple views or realities to record individuals’ or parents’ for this study, meaning making or how parents come to understand their reality of learning informally and being involved in special education (Guba, 1987). I intend to uncover or illuminate parents’ experiences and how they learn informally about special education services provided to their child and what relationship there may be between informal learning and parent involvement.

How I approach this research project currently involves the integration of humanistic and pragmatist views. I believe that there are multiple truths, and I believe that the knowledge that parents bring to the learning situation is important to expand information for greater meaning-making. Having also worked professionally to provide parent education and training opportunities, I am familiar with the barrier’s parents face accessing more formal special education training, and I am concerned that these barriers persist today. I am also aware of the barriers educators and administrators face and the promotion of the perception of parents as over-involved or under-involved and that the national discourse continues to focus on this “double-bind” perspective, perpetuating a less than productive parent involvement outcome.
Chapter Summary

The purpose of this chapter was to provide an overview of the methodology for this proposed research study. The chapter began with philosophical assumptions and inquiry logics to reveal the rational for the selection of a mixed methods research project. Theoretical underpinnings of both qualitative and quantitative paradigms were shared followed by a discussion of current debates surrounding the use of mixed methods as a research methodology. Mixed methods types, strengths, as well as cautions and reasoning were offered for the explanation of the selection of a sequential exploratory design. This chapter also included the background of the researcher, participant sampling process, data collection and analysis along with verification and trustworthiness discussions for both phases of this research proposal to provide the necessary processes of the mixed method design. In this study, mixing is employed by connecting qualitative and quantitative data. Next, Chapter Four describes the qualitative phase findings.
CHAPTER FOUR

QUALITATIVE FINDINGS

The purpose of my research study was two-fold: a) to explore parents’ informal learning of special education, and b) to investigate the relationship between parents’ informal learning and parent involvement. In line with the purpose, two primary research questions guided the study. These were:

1) How do parents learn informally about special education?

2) What is the relationship between parents’ informal learning and parent involvement?

To support this purpose, and answer the research questions, this study utilized a sequential-exploratory mixed method research design, explained in detail in Chapter Three. Consistent with this method, the qualitative phase involved interviewing parents employing semi-structured interviews with 10 parents who had at least one child receiving special education services at the time of the study. A quantitative survey developed from the interview findings further investigated parent learning and involvement. This chapter will provide an overview of the findings from the qualitative phase of this sequential-exploratory study. Chapter Five will discuss the quantitative findings.

Interviews took place in a mutually-agreed-upon public location near the parent’s home, primarily in libraries or private businesses suggested by the parent for privacy and convenience. I chose to use semi-structured questions to probe parents’ thoughts and actions about special education. Interviews began with questions to elicit the point or time when parents found out their child needed special education services until the time of scheduled interviews. I encouraged parents to share whatever depth of information they felt comfortable sharing about their child and their own learning experiences about special education. Parent participants were
(by pseudonyms): Barbara, Louise, Ruth, Kelli, Donna, Amy, Frances, Kristin, Patricia, and George. As in Chapter Three, included below is parent demographic data for reference.

Following the demographic data, the next section will discuss the findings that emerged from interview questions.

Table 1.

*Demographic Data of Interview Participants (N=10)*

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex</th>
<th>Age</th>
<th>Race/Ethnicity</th>
<th>Education</th>
<th>Child’s Need</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbara</td>
<td>F</td>
<td>45-54</td>
<td>White</td>
<td>&gt;4 yr. college</td>
<td>Specific Learning</td>
<td>7</td>
</tr>
<tr>
<td>Louise</td>
<td>F</td>
<td>35-44</td>
<td>White</td>
<td>Some college</td>
<td>Specific Learning</td>
<td>5</td>
</tr>
<tr>
<td>Ruth</td>
<td>F</td>
<td>45-54</td>
<td>White</td>
<td>4 yr. college</td>
<td>Specific Learning</td>
<td>5</td>
</tr>
<tr>
<td>Kelli</td>
<td>F</td>
<td>45-54</td>
<td>White</td>
<td>4 yr. college</td>
<td>Speech and Lang</td>
<td>12</td>
</tr>
<tr>
<td>Donna</td>
<td>F</td>
<td>35-44</td>
<td>Black</td>
<td>&gt;4 yr. college</td>
<td>Specific Learning</td>
<td>8</td>
</tr>
<tr>
<td>Amy</td>
<td>F</td>
<td>45-54</td>
<td>Black</td>
<td>&gt;4 yr. college</td>
<td>Autism</td>
<td>3</td>
</tr>
<tr>
<td>Frances</td>
<td>F</td>
<td>45-54</td>
<td>White</td>
<td>Some college</td>
<td>Autism</td>
<td>11</td>
</tr>
<tr>
<td>Kristen</td>
<td>F</td>
<td>45-54</td>
<td>Black</td>
<td>&gt;4 yr. college</td>
<td>Multiple</td>
<td>7</td>
</tr>
<tr>
<td>Patricia</td>
<td>F</td>
<td>55-64</td>
<td>Asian</td>
<td>4 yr. college</td>
<td>Learning/Emotional</td>
<td>10</td>
</tr>
<tr>
<td>George</td>
<td>M</td>
<td>35-44</td>
<td>White</td>
<td>High school</td>
<td>Emotional</td>
<td>10</td>
</tr>
</tbody>
</table>

The following Data Display on page 135 presents and outlines the qualitative findings in three major sections.
Data Display: Qualitative Findings

Theme One: Realizing A Need to Learn

Questioning, Reflecting and Accepting Change

Questioning and Reflecting

Accepting the need to learn more

Gestating a Path

Starting the learning process and self-examination

Starting a path to special education

Theme Two: Navigating Special Education

A Maze Quest for Information

Online quest

Parent Face-to-face support

Trust, Loss of Trust, and Fighting Through

Learning through the IEP process

Fighting the Battle

Building and Fostering Connections

Emerging Collaboration

Adjusting to Connect and Learn

Theme Three: Sharing, Collaborating, Advocacy to Learn

Developing a Leadership Role

Sharing Lessons Learned

Sources of Information

Paths of Advocacy
The first section of this chapter encompasses parent perceptions about their awareness of their child’s educational needs. Parents share meaningful experiences through comments, sentiments, and viewpoints about their awareness at the time of their child’s struggles and when they realized the new reality of their child requiring special education services. Parents shared comments about forethought and motivation to begin to formulate a path to interact with others to learn more about special education. The second section addresses the findings that emerged regarding parents’ comments on planning and navigating the special education process, including problem-solving education placement needs, evaluation interpretation, decision making for instructional or intervention selections, and self-reflective comments on situational barriers unique to their situation. I will then present findings about parents’ perceptions on the third major theme regarding parents’ views on sharing information with others, their collaboration efforts, and paths of advocacy. A final segment of this chapter summarizes the qualitative findings and provides a brief description of how these findings informed the quantitative portion of this study. To represent the meaningfulness of each parents’ own words, I am including the terminology, slang, and other linguistic features that characterize each participant. Next, I will share the first major theme.

A final segment of this chapter summarizes the qualitative findings and provides a brief description of how these findings informed the quantitative portion of this study. Next, there is a discussion of each of the three major themes, with parents’ own words, including the terminology, slang, and other linguistic features that characterize each participant.

**Realizing A Need to Learn**

The first theme, “Realizing A Need to Learn,” captured several factors impacting the way parents viewed their first entry into realizing a need to learn and gestating a path for learning. To
contextualize parent learning, I reminded each participant that the purpose of the study was to explore parent learning concerning their experiences with their child and special education supports and services. As detailed in Appendix A, I asked parents questions about their child, including strengths and interests, how they learned about their child’s needs, and how they receive supports and services. Overall, parents shared a wide range of responses, understandably revealing the individualization of each parent-child relationship and situation, and, responses were coded as such revealing a theme that centered on questioning, reflecting, and adjusting their thinking to accept the learning commitment that would be needed to move forward.

Overall, findings from the first major theme illuminated parents’ reactions at the time or period after hearing about their child’s needs exposing multiple examples of self-awareness, self-reactiveness, and self-reflection. Parents generally shared how they examined their thinking, feelings, and motivations and considered the intentions of others. They discussed how they focused on the situation, managed their feelings, and how this added information affected their child, their family and themselves. They expressed forethought, planning through intentionality, and they talked about how they formulated a plan to begin to learn about special education services that their child would require (Bandura, 1991, 2001; Illeris, 2004; Schugurensky, 2000). Parents were self-directed, reported self-efficacy and discussed self-regulatory behavior. This included their motivation to help their child and expressing the need to act (Bandura, 2001). Noted, were comments of feelings, experiencing a sudden jolt, self-questioning, how they will address the changes to come, and self-reflection on thoughts at the time of first hearing of their child’s needs. Parents expressed that they needed to adjust and change their approaches to assist their child (Brookfield & Pressskill, 2005). The next section will discuss, in greater detail, this
theme and two subcategories: a) Questioning, Reflecting, and Accepting Change; and b) Gestating A Path.

**Questioning, Reflecting, and Accepting Change**

In this subcategory, parents expressed thoughts and feelings from the very first moments of finding out their child had a disability. They realized they needed to learn more about their child’s needs, and they needed to accept the fact that something needed to be done to help them understand how to help their child in school.

The findings suggest that there were several factors or examples of parents’ informal learning as they recalled these life-changing experiences. This subcategory centers on questioning self and others, reflecting on change and action and accepting to learn. It encompasses two subsections that discuss the subtle or sudden informal and incidental learning parents experienced followed by their comments on accepting the need to learn more to help their child. Next, the two subsections are detailed.

**Questioning and reflecting.** The first subcategory of the first major theme involved comments revealing questioning and reflecting what the future may hold for the parent, their child, and their family. One parent (Donna) experienced unsettling realizations and uneasy feelings about her child, “I first called them (parent organization) not knowing what to do, crying and feeling like crawling up under a rock, because my child just got the diagnosis of autism.” Another parent (Amy) had related questions and worries:

I had a lot of dynamics on top of [diagnosis], not to mention my husband is dyslexic and it was never resolved, ok, I was angry, I was fearful, and I was angry. I didn't know what to do. I just knew something had to be done and I felt like a failure. I felt like a failure. Nobody helps me...all these things on my plate; all these things are on my plate, then I
have to step back and look at it. I had to, and it affects the household, I did not work full time because he has so much going on ok? So, economically, it is stressful; learning as you go along is stressful.

Most parents also questioned their thinking and commented on being overwhelmed by information. For example, Frances wondered about her ability to manage an autistic child:

I kept trying to find reasons why I could be wrong. I just didn’t know what to do. Right at the beginning, I thought of possible delays, cause I didn’t know, …in California, it was 1 to 60 kids. I didn’t know I was pregnant. I freaked out; I didn’t go in there [hospital] to have a baby. I just didn’t know what to do. Right at the beginning, I thought of possible delays, cause I didn’t know, and I smoked, and I was glad I was in childcare [work]. It can be overwhelming [diagnosis] because ya know they do it like a blanket [information] …autism that's all I need to know about it. (Frances)

Amy questioned her suspicions about her second child’s difficulties that ultimately led to a diagnosis:

I knew something was different… the developmental milestones. So, I knew, but as a parent, I don't want to say. I don’t want to (paused) my education defines me… but it doesn't define my...There was a disappointment at first. Being down, and going through your general grief and loss, so ya know who wants a second special needs child? Who wants a first special needs child?

Other parents, when discovering their child’s difficulties, discussed the potentially life-altering realizations about the future of their child, their family, and for themselves. Some experienced a sudden shock, and some experienced over time that there were signs. For example, one parent, Kristen, encountered someone who foresaw limitations in the future for her
child’s life. Compounding her doubts, her doctor even questioned her capability to respond to her child’s needs:

I had a doctor who said I could not take care of my child. …I was told to take my baby home and let her die and have another one…I should put her in an institution…well make up your mind, is she going to be here, or she is not. I thought shame on me if I can’t take care of a two-year-old, so I realized that her life as an adult if she got to live to be an adult, was going to be very different.

Reflecting on these moments, Kristen revealed that this occurred in 2005, and that her daughter had three separate genetic issues. Despite this sudden and life altering news, Kristen through much self-examination and acceptance moved to action and brought her child home despite medical recommendations otherwise.

Another parent, Louise, realized her child might be struggling: “In second grade, um I will just say, shit hit the fan (laughs)…recognized that I was getting little signs, some things not right, up until then something seems a little off.” Barbara also questioned her capabilities and uncertainty of family financial resources, as she was a teacher and could not be sure of her availability to continue teaching full time:

That was the year it [our lives] started to spiral out of control; we started to figure things out ..once I got a diagnosis for her…and I was a teacher, and I had no understanding of it either, ….and then that's when we changed as a family.

George expressed shock and questioned how his son, who was in high school, developed a need for emotional support. “I never imagined him needing special education services. So that came as a shock.” Patricia was suddenly surprised when approached by her high school daughter who was requesting special education services at this point in high school:
It was [daughter’s name], she came to me crying, so many of her friends were taking meds. She figured it out, and she made a stink about it, on her own. They said she was very high [intelligence]…a whole thing on strengths and weaknesses [and] after high school and she seemed… they could help with college. So, yah… she was bullied so much.

Patricia’s comments are another example of the abruptness or a triggering event that can stir surprise or shock. Her comments also exemplified the uncomfortableness and uneasiness parents expressed when they felt that their children were struggling in school (i.e., bullied) and they were unaware. Patricia questioned herself, wondering why she had not realized she was having difficulty at school.

Accepting a need to learn more. Some of the parents talked about acceptance in that they spoke of conflicting emotions from empowerment to fear and sadness upon learning of the specific name and information for their child’s struggling behavior. They talked about the dilemma that came from getting a diagnosis or a label: wanting the label so they can learn more about their child’s needs, but not wanting a label to limit their child’s future access to learning. The dilemma was noted by Louise, who talked about the feeling of not knowing, finally getting the diagnosis and accepting the diagnosis:

Uh, they have a name for that, oh that is what that is, OHHHH (drawn out and said loudly), as parents, they feel more empowered, because now I know what to pursue, but before there is all this bluuuuhhhhhhh (drawn out) …and then there's that relaxation too. I think these kids can be whatever they can be… oh, my kid has special needs, but there is some kind of stage to get to acceptance and then you are empowered. Once I made a decision [accepted the diagnosis] the angst went away...because you made a
decision …all the dyslexia parents, all the parents tell the same story, say they are in crisis, and they picked up the phone, and we talked to them, and oh. ok, other parents have gone through this., oh yes (relaxes the body with a sigh). (Louise)

Ruth talked about how the label or diagnosis can make the needs real so that others will pay attention and help:

They [child] can't read very well, that is devastating to some people, and there is a pathway, once you name that difference and disability, then when you name it, it is real, and you can address, there is none of that at school if you don't even know.

Amy also shared what a diagnostic label meant to her:

I think they (her children) can do anything, and I don't want to be stopped by labels, and I don't want them to be stopped by other people's perception of what they can and cannot do.

Louise shared a similar viewpoint:

Having a child with special needs and differences… and by the way I wrap my arms around both of those ways of talking about it…[daughter] has potential (with excitement in her voice). She is a great kid, she really is, and in the right environment, she can thrive.

Amy’s experiences affected her actions, causing her to question herself about her child’s learning capabilities and questioning her motivations:

I couldn't grasp what my kids were going through, certain things that it's a no brainer for me, it's a huge brainer for them. Then I felt like that…I was just a loser as a parent.

Because I believe in them. I do believe in them.

Amy continues to discuss her motivations at that time and the actions she took:
So, I try really hard to help them break barriers, but then I gotta stop and think, is it for them or am I doing it for me? Is it a pride thing? That you have special kids and you didn't think you would have special kids, because you are smart, and you went to (name of higher education institution), and you do this? Very humbling, very humbling. Because this is how I know, this is how I think; they don't think this way, Am I treating them right? Being compassionate enough? Am I sensitive enough? and sometimes I wasn't, I really felt like, I don't care if you have a disability (raised her voice), you're going to figure this out, we're not going to let this stop you. I think my motivation was ok, but my method wasn't right.

In summary, most parents indicated intentionality and forethought during their process of learning about, reflecting on, and then accepting their child’s learning needs. Some parents shared thoughts on their moral reasoning and self-regulatory actions, and their perceived motivation and intent on acting or doing something. They also questioned themselves on the correctness of their thinking and their ability to help their child reach their potential. Building on these initial experiences, the next section will discuss how the parents mapped out a plan for their child and their role in that plan.

**Gestating a Path**

Once parents received the information about their child’s needs and strengths, parents turned to how they would begin and what steps they may take or how they would go about finding help for the child. The first step toward doing something to move or change begins with self-examination. In this regard, parents reflected on past experiences, including their patterns of behavior and their environment or situation, but also shared thoughts of deep reflection, revealing self-determination and forethought (Argyris, & Schön, 1978). Additionally, as they started their path, their planning almost without their knowing, came from the strengths as well
as their child’s needs (Schugurensky, 2001). Most did not set out to follow a highly structured plan with specific ends in mind. However they did articulate a desire to act and conveyed a general building of the steps they took (Illeris, 2004). Their learning path or the choices they made evolved from drawing from self-examination and observing or reacting to others during or following interactions (Marsick & Watkins, 1999). As the parent began reaching out to schools or looking for ways to access information, most shared comments about the learning they experienced during their initial connections with the special education processes and practices. A few parents determined that working with special education would not be easy and that jargon, terminology, and resources were gained more through happenstance than consistent and guided support. Many expressed frustrations. Described next are two subsections detailing further the second subcategory of gestating a path.

Starting the learning process and self-examination. The parents interviewed realized that they had to act to make sure their children were getting the services they needed. One parent (Kelli) realized that, although she did not anticipate the need to do so before the diagnosis, she would have to do something regarding her children’s education:

I wouldn't have done anything in this area (public education) if they (children) had not had difficulty in this area… learning problems… most of the problems start out typical not speaking correctly. When you have a kid that is struggling [with] something, then you do something whether you want to or not because it wasn't typical.

Most parents revealed forethought and planning or acts taken when they continue to learn and gain self-efficacy, but they also shared their lack of capabilities to produce results, prompting a need for more knowledge. One example of this was when Barbara encountered the school system:
So, it really started…my education started with her (daughter). Once I had a diagnosis for her…and I was a teacher (emphasized), and I had no understanding of it either, so, but, I um, because I knew nothing, I started down a road to educate myself.

Even though the parents did not have the information they needed about their child’s educational needs at the time, as parent role they know their child best, so they began the process of learning guided by these strengths. Many parent comments indicated self-directed and planned behavior. Some parents indicated that they did not want to sit back and wait for a proposed plan for their children designed by someone else; they preferred to determine the courses of action. While not typically structured or organized, all parents were motivated by a desire to regulate the execution of the plans and eager to learn from others. All parents expressed wanting to be an informed learner so that they could become more involved with the special education process and began to dedicate resources and time to their child’s education program. Donna felt motivated to learn because her child needed things in which she had no background:

I didn't know anything about special education prior to that, and although I still had bachelors and masters, and working in it…my beginning of my professional career… I was still in (emphasized) special education and knowing about it (special education) but definitely on a professional side but not a personal side... there is a difference. The difference is that ya know with [your] own children, you want to advocate for them as much as possible. You want to learn more. You don't just take what a doctor says, what therapists says, or even what test results say, you want to look at the ability of your child. So, it was like full-fledged learning as you go. On the job training as you go. Learning about this and that and just everything, to make sure that my child received whatever he
was supposed to receive and knowing. The things I could advocate for as I learned along the way and just making sure that everyone [was] on the same page regarding services. If [they] weren't ...still advocating for what I felt my child needed.

Parents in general, saw their experiences as an evolution of understanding what they needed to do or what path to take to help their child get the necessary results. The extent of the learning and the complexity of the topics were also evident in their descriptions of moving forward to learn. Barbara’s son became eligible years later in elementary school for special education services. Barbara explained that:

It’s funny because I thought I had gotten …the perfect IEP, and made sure he gets what he needs, and it was apparent that (son)…was not going to get, cause they put him with three other kids.

And, Ruth found that she took a similar path with her first and second children, starting with resources and reading to find information:

And then I started realizing, I was on the same path (first child received special education) [with second child]. It just really started absorbing a lot of my time. I was learning, a lot of reading and a lot of learning the behavioral support field, positive behavioral support.

Parents had to seek answers to their questions as the learning was often private and haphazard. Some parents mentioned they were trying to figure out the puzzle of where to start. Kristen’s quest for information included figuring out how to get the information she needed:

So, I am making this up as I go. I need data, and I need information. I thought…how about no goals, how about no limits, how about I am going to try for another five years. She is going to lead us. She is going to show us. We are going to help her.
A few parents shared their concerns in problem-solving important problems with access for their child’s program, for example, lack of access to efficacious instructional methods, cost barriers to provide the educational placement that would allow for her child to receive the help she needed and cost barriers in accessing help. Amy knew about beneficial instruction for her child but there were financial barriers. She shared:

Well, for her (daughter with education needs) it was her self-esteem. She's seeing everybody around her get accepted into all of these [public city] schools, and she has none. So now… then the schools that say she is qualified for [are] horrible. I am not putting my daughter in that environment because my son was in that environment. He was strong armed robbed. He was bullied. There were a lot of things that were done to him in that building, to him that he was traumatized. When we drive past the school, he is like (recoiled).

Amy then realized that she had to do something about this situation and demonstrated her willingness to take extreme measures but experienced financial barriers to getting what her child needed:

I am going to fight. I am going to figure it out. The school…I would like to put her in is 60,000 dollars. It is (names private school). The director is dyslexic. I had her (daughter) tested in her (names instructional method) …24,000 dollars. I could afford the assessment, but not the treatment. I believe it will work, but I don't have the 24,000 dollars to pay in a 6-8-week period. I'll move. I am serious (to find the district that uses the named instructional method). Right now, she does not have a high school to go to in the fall.
George commented that the cost of gas to get to parent meetings was a barrier, however, he thought he would investigate local parent groups to begin to learn more about what he needed to do for his son:

Most of my life has been about educating myself. I knew I had to do something. I didn't know what I had to do, so I found once a month, somehow [I] can make a little extra gas money (to drive to the parent meeting), [an] independent gifted talented parent group. [I] hooked up with (pauses)… [will] find a little time and money to make it happen. I’ve got to go (emphasizes). [It] helped a lot to find those groups. Close to what I needed to know, [and] no charge (to attend).

The previous subsection explained how parents were just starting the process of planning and through self-examination realized they would begin with their child’s strengths and needs to guide them. With this knowledge, they began to plan and share their thoughts on the barriers they experienced early on in their planning. They also problem solved solutions. The next subsection will provide parents’ viewpoints on their initial interactions with special education.

**Starting a path to special education.** Parents had to learn about special education in schools and familiarize themselves with the complexities of special education policies, procedures, and processes. One parent (Donna) mentioned the number and type of staff involved:

With learning about special education, just services, just everything in terms of services. Initially he had an IFSP (preschool age individual program) then graduated over to IEP. [Had to learn] who team players are, just know who the coordinator…the SLP (speech language pathologist), the therapists, the teachers partnering up…what the IEP is.
A few of the parents mentioned that they realized knowledge was the key or the power to getting to the services they needed for their child. They encountered frustrations and even negative interactions beginning at this early phase of working with special education. They found out about activities and training offered on topics related to their child’s needs, how to get services started, and how to maintain them. For example, Kristen felt that her belief in her child helped her to create that path to getting what her child needed:

I had to get knowledge to fortify myself, so I could understand what this looked like so that I could keep that in mind, way, way, down the road, I could start with my end result.

However, Kristen also emphasized a sense of urgency in her learning and how she had to stay on her path. She had to implore professionals to continue to work with her child and she felt a responsibility to monitor the services she received for her daughter. Kristen explained:

I don't have the luxury, because I lose time. I have to get ahead of things because [my daughter is] living in the community…all (of the services for children with disabilities are) moving in that direction. I needed to know what expectations would be. By then my whole life would be a fight, but I felt if I looked past the surface, way deep deep down in there, she (daughter) was in there…she was doing her part, what she could. She was breathing, so as her mother, it was my part to get to her, if we could just get to her, so she is deep deep down in there. If you (teachers) would just fight with me. That [is] why I said I thought I could get the educational folks on board. Do your stuff, …do your exercises, she was hypotonic for years, so she couldn't sit up. Just help me (referring to therapists). You’re coming to the house anyway. Do your 45 to 55 minutes. You’re coming anyway? So help me get to her...come along with me (emphasized) and if you
could just look past the surface, she is in there somewhere, and that is my motivation for years, she is in there.

Most parents encountered frustrations as they did not know how to get others to address their child’s needs at a younger age. For Barbara who shared: “my education started …because there was a lack of understanding by the school system.” was one example of when parents reported on the lack of awareness of children’s needs in the schools. Another parent, Kelli, provided a scenario of how frustrating the lack of identification of services was for her. In this case there was a considerable time delay before her child received services. Kelli is just one of several parents who shared their sentiments on the delay of identification and services. Despite her efforts to have her child identified for services through Child Find at age four, there was a long delay in providing supports and services for her daughter in elementary school. It was not until years later when the school evaluation team identified her daughter as needing special education and offered her services. Her daughter was now years behind in her reading skills and Kelli held a grudge explaining:

Dyslexia to me… I didn't know what that meant, and therefore school (education) will fix it. So, I didn't do anything about it (dyslexia) until she was 10. After getting rejected here [in] (names state). Child Find in this county... I hold a grudge.

This delay in identification spurred Kelli to start her plan to learn about dyslexia, and the interventions that would help her child close the gap of her reading deficits.

A few parents chose more formal or structured learning paths to gain information about special education programs and interventions. For these parents, informal learning was additive to more formal learning opportunities. Barbara commented:
went out to California and got some training, a weeklong course and that [was] there [as] a way to help students that significantly struggle with reading issues, writing, spelling… there are answers out there and [I] had none, no idea…no idea whatsoever.

When asked what she did initially to gain information about special education, Kristen explained a general plan she had taken:

What I was doing is attending special education parent trainings…they (other parents) laughed at me. I started going to transition out of high school [training] into adulthood when (daughter) was two before she transitioned into [K-12] school. I was going to monthly meetings to learn about how she would transition out (of school services). I purposefully…I knew I would get a good five years of this (transition training) …when I jump[ed] back in, when (daughter) was about now…at 13, 14 [then] all of this stuff is not new to me. I could just learn what laws changed, but I wouldn't be a newbie, so to speak.

Motivated to learn about special education services, Kristen expressed commitment to finding help for her child:

She is going to school. So, I was really committed since they (younger siblings) didn't have homework… I had the time. I was really committed to getting out and learning all about the future when my life allowed me to have the time because I was cognizant of …to realize.

Most parents referenced special education as a system with unintended consequences. They felt greater focus and attention should be on the individual students’ strengths and not focus on what they could not achieve at the time. They recognized that the intimate knowledge they have of their children is a resource and the school district should use this knowledge to
ensure that the IEP meets their child’s needs. Kristen’s concerns stemmed from the school’s focus on her child’s weaknesses as opposed to her strengths:

Everything about special education is about based on about the inability to do and the inability to keep up with her same-aged peers, and there are many things she cannot do. She is a fighter. She is determined. She is persistent, extremely social, and she is a delightful young lady in the making. …I don’t want to do (child’s name) a disservice. Kelli also focused on her child’s strengths. She described how her daughter received supports in only some of her academic classes, making Kelli question the school’s knowledge of what her child needed:

Her strengths…street smart. Good self-awareness, good street smarts, and she probably has some gifts in science, math, graphic design. She is [in] computer-aided design, A in college English, and is supported, but other classes [not].

In this second subcategory “Gestating A Path” most parents indicated forethought and planning to begin their self-examination. They shared the realities of their skills and how they needed the knowledge to gain power, and most mentioned that they needed to fight for their child. This subcategory encompassed parents’ first involvement with special education. Parents were starting a path to work with special education staff in their children’s schools but did not always have the results they expected. They expressed frustrations with obtaining the services in a timely manner and with the lack of support and information to help them formulate a way to help their child. Next, I will provide an overview of the first major theme.

**Summary of Realizing A Need to Learn**

Overall, the findings from the first major theme illuminated the questioning and reflecting that parents do when learning their child has a disability. This theme centered on the
first steps to developing a path and illustrates how parents often had little knowledge to develop that path other than relying on their own capabilities and following the strengths of their child. They discovered an often-negative path to learning about the special education process. Parent shared the path to learning was not clear or evident, and they were often starting from a place of no knowledge at all. Parents readily explained that they learned from their early experiences through questioning and reflecting on problems and barriers. Some shared thoughts on their moral reasoning, self-regulatory actions, and their perceived motivation and intent for acting or doing something. They also revealed how they questioned themselves on the correctness of their thinking and harbored negative feelings even before services began through special education. They reported primarily learning on their own and staying focused on their child’s strengths to guide them. The next section will discuss how they learned to navigate the world of special education.

Navigating Special Education

The second major theme centered on how parents learned to navigate the maze of information they encountered through discussion or discovery on their own. Overall, parents shared insights that described their learning in ways that made it clear they were learning primarily in informal ways. Parents shared how they gained knowledge, skills, and attitudes, as well as how they obtained greater self-efficacy in advocating for their child, despite the difficult decisions they had to make and the barriers they encountered while reflecting and adjusting to making changes (Argyris & Schon, 1978). Most parents shared experiences about their quest for information, during which they often learned unexpectedly, tripping over or incidentally learning about resources that could help their child (Marsick & Volpe, 1999), and sources or people that guided them through their maze quest (Laiken, 2003). The people who helped guide them were
often other parents with whom they shared learning experiences. They discussed trial and error and how they made mistakes as they were learning overly complex information (Dale & Bell, 1999; Magrath, 1997; Marotti, 1999). They shared sentiments on how they contemplated and addressed conflicts as they navigated and learned about special education regulatory requirements of evaluations and programming decisions for their child.

Parent’s shared experiences of incidental learning in that they were not always privy to complete information during the IEP process, compromising their trust with the school teams. They also shared how they moved ahead after reflection and adjusting despite the barriers and their loss of trust. Parents described ongoing consideration of their financial barriers concerning accessing sources of information and resources for themselves to help their child so that their child receives the services they need, and parents can be collaborative, informed members of the IEP process. Next, there is a detailed description of each of the three subcategories for the second major theme, which includes how parents found their way through a maze of information, trust, and ‘fighting on,’ to build and foster valuable connections.

A Maze Quest

Most parents explained what they had learned regarding the complexity, specificity and extensive number of the topics. Some parents talked about how they did not know where to begin and that there were barriers to accessing information. They shared; however, they were able to access information in a variety of ways, including using informal learning tools (e.g., the Internet, books, printed materials). Some shared how they used the information they thought would address the problem at that moment or answer questions for the education team, and it was not unusual for them to stumble upon information inadvertently as they continued their learning path.
Online quest. Informal learning included the use of the Internet and other online resources. Findings revealed a variety of parent responses regarding purposes for online use, types of informational sites accessed, and usefulness for the parent. Barbara described her experience:

I did go online, for me as a master's student, you’re not sure really what is what. For me to find what are acceptable research articles. If I am going to say anything to anyone. I have to find credible things, to find and tied in with this research or something that is more valid. I read a lot, read a lot for a job (tutoring). I don't blog, tweet a little. I have on occasion…I’ll retweet, but other than things, I go to on my computer. I'll read an article if someone says look at it on Facebook.

Kelli used the Internet in a limited way and found that “The only place I go are the research universities that work on dyslexia. University of Oregon and NCIL (National Center on Improving Literacy) a beacon site for screening for exemplars.” Louise also used:

Resources that I lean on and get a lot out of …Learning Ally: big go-tos even if I just follow them on Facebook, and they push things out to me, and that's been great.

Sometimes go on to research, but more often than not, uh, if it is useful, then I go on and research. I love Facebook. It's kind of a dying social media as others are growing, however for parents, for groups, I think who were later adopters, parents they’re still happy there. Definitely things online using them cause that is just Google.

Donna addressed the issue of parent access to computers and to the Internet through broadband connections and said,

Most have access. Yes, so most people they don't have to come to a library, they have a smartphone. So definitely your telephone. So, you can have access to [the] Internet,
emails, etc. So, if you want to watch someone’s' podcast, so all you have to do is click a link. So very accessible to people. So some people who cannot afford ...Verizon or FiOS...I know Comcast has a program that can give the parent a computer for child...and free wi-fi at McDonald's, Starbucks, hotels, etcetera.

Donna continued sharing her views ongoing online as the first source of information or as the main source of resources:

I do think that is true there could be something pressing on someone in middle of night, ...in middle of night most offices are closed. Some people don’t have crisis line. It’s not a crisis but most people most people will go [online] because of accessibility. So, I think that is why some of the reasons why parents go online so they can get a basis, so hopefully they don't think it is gospel. Then talk to someone they rely on, then they can. How does this relate to my child? … how can I get this service for my child...? if this is true or not true.

When asked about her use of social media for information, Amy did not read blogs, but when asked about searching for special education information content available online, she said, I do that, sometimes I do sit, and I go deeper, what about this and what about that (names a website) and I’m on these other sites, because I don't have a face to face person to guide me through the process, you are learning, but sometimes you’re not learning cause you are skimming.

A few parents indicated that they used the Internet for some online learning or to search for general resources. For example, Frances used the following strategy, “I just type in what I have a question about, I look at the titles that seem to apply.” Barbara found the more formal
online learning options dissatisfying and stated, “I am taking two online courses now, and I absolutely hate them. I love to take notes [in class]. I am able to get all out of it that I can.”

In contrast, George had a unique perspective:

Personally, I look from time to time. I have found a couple of different resources, (names university), and umm...other based in England, can't think of it right this second. I took a class on psychology… teacher felt I did enough work to pass the class. My wheels are always moving in some direction, thinking about the antecedents, and his (refers to son’s) behavior.

Like George, Amy sometimes felt bombarded by a lot of emails.

A lot of emails at this point in my life. I get a little overwhelmed with it because on one hand it is a lot of information and it frustrates me cause I can't do anything [about the email content]. Then I'm like I just can’t do it. So, I need to focus on something else.

Ruth, like George and Amy, did not use the Internet, but because her child started special education over a decade ago, before the rise of the Internet as a source of valuable and accessible information:

Remember early on, so 12 years ago, a decade... the Internet was not very big, if I was [online] I might have been searching (names her state’s) parent training information center which is called (name). They had a lot of information on their website.

Kristen agreed with the previous participants about not using online resources and said,

No, I don't have time to be on network to hear what everyone is saying, she has autism, and everybody...then she has seizures. I don't find comfort in support groups. I run across moms that I have worked with at hospital. I can't find that many parents that are parents of girls with autism that are older.
The participants in the sample used the Internet as a resource for information to varying degrees, depending on their differing perspectives on the exercise related to its value, accessibility, and necessary investment of time. At the same time, some parents utilized online tools; they also benefited from support from their families, parent groups, and expert resources, which are detailed in the next section.

**Face-to-face support.** Parents discussed how they learned from face-to-face support from their families and other parent groups and people. Frances had her family to support her, “There is my brother and his wife and their child, so they love him (her son with autism) so much, and (friend’s name).” Frances continues, discussing how she, when referred by her doctor’s office to attend classes, learned about how to become an advocate for her child:

I was told first about developmental clinic…for children age 4 to 11, and what you do is you meet every Saturday from 10:00 to 12:00 and, um, you go to a class where they teach you to advocate for your child, and they tell you how the government system works, and how you can get your two cents in.

George explained how he attended face-to-face meetings for support for the first time. Again, George mentions finding the school support groups on his own after a lengthy search, again demonstrating the barriers parents experience. He reflected on how he felt as he shared for the first time in public about “junk” that went on with his son’s situation:

It is very busy at beginning of the month, so that group I went there. I don't like speaking. I don't like public speaking at all, uh, shy guy...first meeting. I spoke up like what the heck do you do when? It turns out; I am asking questions that are pretty serious [legal] stuff, so I am not supposed….to be talking about….to be asking [questions]. I was pretty torn up, just speaking through some of the junk that went on [about son’s
situation). It was about eight months by this time (said with emphasis). It took me a while to find these groups.

George continued to talk about the timeliness of face-to-face meetings that were requested urgently of school staff and important to helping his son at the time:

It (son’s need for assistance) proceeded so quickly, so, I started inquiring ...how (son) being assigned, emailed to counselor, and eventually met with four or five, teachers, but not all of them, two teachers...three hours combined ....and these are all gifted courses...so, and I kept trying to meet with all teachers.

Parents found additional sources of information through different informal learning ways. Louise detailed a visit to a clinical setting and the finding of an education consultant with expertise in education programming. This is one example of how parents incidentally learned about sources of information from other planned activities. This example illustrates how the parent located this source, by chance, from services they sought outside the public education system:

We go every six months (for repeated diagnostics). To (University evaluation clinic) which doesn’t believe in dyslexia which is interesting. I have found a resource that no one I come into contact new existed, even being involved in … (state’s special education parent advisory council). I found this guy by happenstance, he is (name) he works for (name), and he is on site at (name). He is a resource to anyone who is there, developmental pediatrics, and beyond, and as an advocate for other people. He is very knowledgeable. I don't know that let's go figure it out, this is for my daughter. I was literally there for a 1 1/2 hours. How do you tell them?... so he said...(quoting evaluator) so you need to say... she is the special education teacher who is her case manager, and
she doesn't know how to be a case manager, but you need to tell her she is using this strategy for students who are less cognitively capable, so you are using the words the right ways and application of this information (end quote).

Louise quoted exactly what the diagnostician shared with her so she could illustrate the recommendations made to of Louise and how she might communicate with her child’s teacher. This illustrated that parents must know where to go for specialized information. They must know about their child’s specific strengths and needs, and they must know the features of programs (specificity) to know when to use a resource recommended and when not to use the resource recommended. In this case the school was recommending one source for all the students with disabilities because it was what according to Louise, they knew or what was available.

Another parent, Barbara understood the different diagnoses. She was looking for more definitive diagnosis information:

So actually, I went to (names evaluation center) when he was in 2nd grade. [They said] He is ADHD; so, wait… if it was ADHD and if it was both his reading and math, both would be affected but only [his] reading is affected, so, I know a little bit about dyslexia, so, I went to the supervisor, and I asked, the Dr. (name), you cannot tell me this is ADHD. Then I went to the supervisor. Look, I want someone else to see him. They said...they were like nope. We stand by our guy. He has been here for so long, so, he (son) got ADHD (diagnosis) by mid to 3rd grade. But I want[ed] someone else and so, I…someone to look at dyslexia, it's crazy, so I knew what to ask for, so, he got that diagnosis (dyslexia)...end of 3rd grade. By the end of 4\textsuperscript{th} grade, so… he is getting what
he needs. So, I knew what to ask for, by now I knew what to ask for, so he is getting what he needs.

The first subcategory highlights the use of online resources indicating a varying degree of use depending on the type of exercise related to its value, accessibility, and investment of time. The first subcategory also includes parents’ experiences of learning from face to face supports and the nonlinear nature of learning. It reveals perceptions about the maze of information that parents must access and that they learn gradually, not only about the volume and complexity of information but the need for the timeliness of information throughout their child’s education. The next section will discuss parents’ experiences with school staff to obtain special education resources.

**Trust, Loss of Trust, and Fighting On**

Parents’ perceptions of how they learn information about their child’s education program when interacting directly with public schools includes the ways parents gained information and used knowledge from the resources mentioned above. Specifically, the next set of parent experiences discusses trust and illuminates how they lost trust in educators and other school staff members working in the context of special education specifically during IEP meetings with their children. Parents also indicated that this learning, the loss of trust, also occurred outside of the IEP meetings, during a variety of types of interactions across all phases of the public-school special education process.

**Learning the IEP process.** One parent trusted her school to identify what her child needed to learn. This parent lost trust in the educators at her child’s school when she learned about an intervention model and referral process implemented. The parent (Ruth) engaged with
the educators and experienced how the pre-referral process for the special education program functioned, or in this case, did not function to meet her child’s needs:

They have a system called the intervention and referral system (IRS) its like RTI became a big thing, (state) had this model where they do some screening and put some things in place before make [a] referral for special education. So, we were in that program for his whole first year, talking to a team about his (son’s) needs, and it wasn’t until the end of 2nd grade, his second-grade teacher pulled us aside and said. He is not reading at all. Stop with the IRS, and you (parents) need to make sure you ask for a special ed referral.

Ruth also discussed the delay in identifying her child’s disability and need for specially designed instruction. The teachers’ information contradicted with the rest of the team’s recommendations, making it clear that there was a breakdown in communication and that the team had not been transparent with information:

So, at that point when we said enough of this…it's time to do a formal referral to special education and then that process started for him, and he was evaluated over the summer of 2nd grade, so when he started 3rd grade, there was an IEP in place for him.

Louise also shared her perspective and views on evaluation to intervention struggles:

where I am going with this …is my daughter did not have a (names reading program) certified person, or whatever (name) based structured person, so I had to advocate for that for three years. So, I just got someone, and she is not very good at it. Even though she has been teaching for 20 years. She's just not; she can’t do it. But that diagnostic piece is so key, right? But she is in a small group, ok, ok, I was advocating for 1:1. I guess I won’t go to mediation over that; ya got the lady certified, so I will call it a win.
Louise also shared about IEP goals and the struggles with the IEP team and her lack of trust by continuing to confer with her previous private school educators who she trusted:

I need for this school to reduce her cognitive load, so she can keep progress, working memory, ok you guys have not done anything for her EF (executive functioning). For years I have been trying to get you guys… have not been able to do anything for (daughter’s) EF. I brought up EF recently to use, so they brought out (Skillstreaming). I don't trust them (school) anymore which is sad. It says right here; this program is for kids with severe behavioral problems. I said that's not my kid, they suggested this because this is all they got, tell me what the goals are for this program, is that matching the needs of my daughter's or not? They are like here is our cookie-cutter goal, and I’ll go back to her private school, they're a great resource, there like, oh yea that's too broad, come on, you need like three goals there…At least, I got this, and I got that, and it doesn’t make me sick, and I feel proud that we made some progress.

Amy, too, developed strong feelings about how the IEP team at her child’s school did not seem to be working for the best interests of her child. “It's amazing to me that people who say they are about education are not, they just aren't...and then there are teachers who are afraid...So it's just been hard.” Amy continued with a description of the academic compromises that were necessary to get intensive instructional help for her child and how she uses what she learned about special education regulations to help her second child:

But what I have found one hour, once-a-week is not enough. So, I fought with my IEP team with my daughter to provide structured literacy five days a week. I don't care. Take away Spanish. She'll get it in when she gets there, move her schedule so that her
schedule so that she gets a whole class period of some type of help five days a week, and I learned that by (name of lawyer) through disability rights law center.

Kelli, likewise, had a similar experience. She trusted the school to work with her but then would experience inconsistency in IEP implementation across schools:

Every time I left a district, I'd say stock up my IEP (ensuring all services were included in the IEP prior to leaving district). [I] get to the next school and then [the] new district would say… We don't do that here… we were in a three-year stint in California, …not long… IEPs always seemed so promising, we had really great people everywhere we went. …[but] IEPs are isolating… because no problem is ever solved by staying in a silo… that is what IEP is, it is parents in a box, in a little room, crowded out, outnumbered, procedurally outwitted, and outplayed. It is like Survivor… but you lose every time, and you lose in due process, in IEP room, in classroom time. They are going to try to getcha; there are gotcha people in the world. People don't want to go to due process.

Amy voiced the urgency she had to learn about parent rights and regulations so that she could ensure her child was getting the services needed:

I had to figure him out, and then I had to figure out the best way he learns and then trying to get the school system to catch on to this. To say this is his individual way of doing things. You have to comply because now I have a legal document that says you have to. So, then I go to the story of… are the IEP… written effectively? Are they written for the child? Are they written for the school to be compliant?

**Fighting the battle.** Most of the parents used the term fight or a similar expression to represent the wins and losses they experienced with the school and their services. Several
parents shared their lack of satisfaction with the school IEP team process and plan development. Amy said that,

I don't trust the district, I have been through too much with [name of city school] schools to trust the district, that's number 1. No. 2, once I weed through the distrust to find somebody to give her a chance, now I have to train you (referring to new school team), because if I find someone to give her a chance, then I have to train them.

Donna does not trust the supports her children were receiving from the public-school programs. It’s when you have conversations with the parents offline or after the meeting outside of that setting...from other people…their case manager for their child at school. Your person is doing all of that, my person is doing nothing...it is more after the formal IEP process.

Louise expressed her feelings about the challenging IEP experience she had where,

You fight for eligibility, and I say fight because you have to keep bringing it up and it's exhausting and you keep bringing it up and you might get a 1/2 step further, right? Then once your eligible then you have to go into the IEP discussions.

Kristen also talks about getting services as a fight. She said, “It was always going to be a fight and their (educators’) perceptions...I don't have any limits;” and George reflected on what he would have done differently had he known about the special education process sooner. “If I know now what I know, I would have asked for a "team level meeting." George continues talking about terminology, special education process, and regulatory information he learned incidentally from school educators:

Yeah, the (terms), the vernacular. I was saying what I wanted, but it didn't seem to matter if didn't happening...they didn’t tell me to put in writing. I just started writing.
So, kind of going nuts about it. The child (son) needs help, and I don't necessarily know what he needs. I heard of uhm...a conversation...everybody in the Gifted Talented department, couple lawyers, all in department, us parents. Someone asked ...is anyone receiving special education services...the coordinators said no ...I think there is a level ...that ...so there is something....it is kind of the whole process...you get bits and pieces.
A big puzzle, so when someone says...we don't provide gifted unless IEP, so [you] work on that. Then the MDT processes, [I] get what [is] needed, so went through 504 process, at that point. I joined up with special education services committee. ...they tell me I have a 504 plan three months ago, so she said...so she (administrator) is looking at the person in charge of my area...so they are looking...(at a list) but the school told me with my psychologist ...in the meeting. The psychologist said ...look, see he has a 504 plan now ...so now you (parent) can sue me (psychologist).

The findings from the second subcategory of the second major theme involved parents’ learning of the IEP process. Also mentioned, were delays of timely identification of their child’s needs, difficulties with communication with the IEP team, and understanding special education terminology, along with, reported pressures to settle for supports and services offered to their child. Parents’ reported frustrations shared, stemmed from having the trust of the special education process initially and then losing that trust by either incidentally hearing about education issues or by experiencing the lack of IEP implementation. The findings also revealed that parents had learned information incidentally and, with time, developed self-efficacy and satisfaction of their learning progress. All, except for one parent whose’ child was offered special education early in high school, mentioned frustration with the public schools. Detailed next is the third and final subcategory encompassing the parents’ need to accomplish their goals.
**Building and Fostering Connections**

This subcategory centered around parents’ sense of self-efficacy having increased their knowledge, skills, and attitudes, and how the parents used complex information about special education to become more involved in the development of their child’s IEP. They reported using information, insights, and content from educational sources and resources gathered. Findings reveal that the participants applied and transferred information to contribute to their child’s IEP and how they attempted to build and foster connections with the public school IEP team.

**Emerging collaboration.** Parents through reflection and experience began to share insights about how they started to become more involved and empowered in the IEP process. For example, Ruth shared her feelings with the IEP team after she reflected on someone’s previous recommendations and stated:

> It was ...adding on my knowledge base, just layering, layering, layering,

> But I was doing all of that but hadn't reached the level yet that I had trusted myself with the knowledge, so it was just that, I didn't want to be labeled that (with emphasis) parent. I didn't want to be seen as a noncollaborative team member. I didn't want to suggest something cause I really might not be accurate and they're saying that this is ok, and what if I look foolish by suggesting this? I'm just a mom (makes air quotes), ...it was that...then I heard (with emphasis) what the lawyer said, and it resonated. I thought that is my job on this team to be the mom (emphasized), to be the one that says, to say well this is not enough. I expected this.

One parent (Louise) talked about how she shared information with the team after her learning experience and talked about avoiding less productive ways of communicating:
I will tell you my brain, and my strengths are results (with emphasis), and I can pivot and be flexible, and I will do enough research, too. I don't accept, so I (ask again) are you gonna do that? You know me ...I ask well is the CTOPP (example of assessment tool) one of them? I will do what I want to do, she has to tell me what she thinks is good, but I know that now.

Louise also shared strategies she uses to work with IEP teams: “You have to put all in writing. I take my weirdo little notes. I send an email, like in business, you said you would do that. I would do that.” Louise also mentions techniques to negotiate with the IEP team meeting: “Hey, let's do a trial. Let's put him in here for a marking period, to see how it works. I can get them to do trials...Oh, I guess we can trial it ...there ya go.”

A few parents discussed bringing ideas to the team meeting to develop more appropriate goals for their child. Kristen, for example, said, “It’s access and quality of life...as I said, I'm not, I believe for (daughter) specifically, but (daughter) is a portal into fighting the fight.” She illustrated how she offered information to the team to develop goals to help her daughter prepare for her life after school:

(Daughters) Sisters have already planned. They know that (state) is an Employment First State (law), so they are going to string beads, we are going to travel the world, (daughter with a disability) is going to make bracelets. They (two sisters) are willing to be an understanding employer, sell online so in case she (daughter) has to rest, she won't lose her job. She will be a make-up artist. So, [IEP team] spend time with her, and find out what she likes.
Ruth commented on tips that she learned over time about interpreting diagnostic and evaluation reports and how she figured out how to bypass some terms that are not always well known by all educators or parents so that you can foster a relationship and move on.

Don't get hung up on the word dyslexia, if you get your report, so we will tell you when as other parents, you get the report back and ... cause that is half the damn battle, we are now all using the same words...some other words they get hung up on....another word, diagnosis versus eligibility. There are enough parents now that have been in the nitty gritty that we know some good quick shortcuts.

**Adjusting to connect and learn.** A few parents also shared that they learned to adjust their approach, applying new attitudes they developed when discussing recommendations with the team. Louise felt motivated after being able to reflect on her previous learning and success with avoiding “battles” in meetings:

Feeling I need to keep going... I’m slowly but surely, I get some little rewards, I’m making it slowly but surely, I want results tomorrow, but I am not belligerent.

Amy also shared how she fosters connections by sharing pivotal information with the IEP team to educate them:

Whatever I gain from (therapy institution), or whatever I gain from other places, I gather it up, and I take it to IEP meetings, and they are thinking "What in the World"... cause I’m going ok, this is what you have to do cause this is what the studies are showing.

Parents spoke of learning and what to ask for, discussed how they came to learn about advocating for their child and shared skills used to question and check that their child receives services they need. Amy also provided examples of how she applied her previous learning from IEP meetings to her second child’s IEP:
But my IEP meeting with my daughter is totally different than my son's (IEP)…. because of what I learned, because of the tools I have, what had happened to him is going to take a whole lot to get above on me now…and the difference I think with my son as opposed to my daughter is that a lot of the IEP meetings and a lot of the advocating and fighting I had to deal with incompetence…How it will be different for her daughter: …So, I’ve been there [charter school]. I am part of the fabric, so, the relationship I have with them is different like her principal she was the… the one who was like, she said you know how we do things here. She helped me. She walked me through having my daughter repeating 3rd grade because I was bucking and fighting…she's like, no I think it would be good for her we know her, we see what's going on and have some things in place, and it turned out to be one of the best decisions we ever made, and because I had a relationship with the principal, because she knows her kids, (name) knows her kids Louise also found someone at her child’s school who understood, “[The] coordinator, who has dyslexia herself... She is a special education teacher, her name is (name)… if you have someone who you can actually work with.” This commitment to learning also led to finding untapped resources for the schools. Parents sometimes learned through more formal or structured methods and in doing so were able to leverage this learning to help build and foster team relationships: Ruth described her advocacy training information and how it influenced her approach to communication with the IEP team.

I’m gonna tell them it doesn't feel right, and I’m gonna tell them why it doesn’t feel right, and I am gonna tell them what I think it should be… and then the conversations will start, and I feel like I moved into being [at the] level of being a team member after that, um
because, ya you know, I had… had training and stuff in the meantime, and I really understood what it meant to be assertive rather than aggressive.

Ruth shared one additional comment about how she again relied on previous learning and used it while negotiating and fostering connections:

I got to a point where I started to feel I knew what the reading needs are or what the reading data meant or read as…oh these Dibel (diagnostic tool) scores would lead me to believe this is an intensive intervention situation. Then you hear a teacher say something like, well we don't give any kids...I'm thinking I do know more than her right now. I am interpreting this correctly, and there is a misinterpretation on this side. So, by the time I heard that, I had already heard the lawyers' statement…let's pull out the protocols and take a look at them... cause my understanding is this category would be intensive intervention, and I learned a way to… how [to] address…you don't know this, but I do...

Another example of how parents were adjusting to make connections was share by Amy. She stated:

Because sometimes when you are talking, they’re not going to hear what you’re saying they are going to hear how you are saying it, so, if you may have a valid point, but if your yelling and screaming it, doing...even though it is valid. You're legitimate in how you feel, again ok, you going to say ok, I am going to hold back ...but I still want them to get my point.

Amy went on to share her insights of other’s and her role on the IEP team:

Like I said, there are just some teachers who just wouldn't do. They didn’t care, because, I think it was fear based. I really think their decisions were fear based, because you have to go about this curriculum, and you have to do things this way, you have to do it that,
that way or your job is in jeopardy. We [now] have a mutual respect, because I did at them, and they come back at me, and we go back and forth.

Thus, parents described ways they gained, over time, discussion skills to build and foster connections. This learning was in addition to the complex content of special education diagnostics, interventions and policies, and procedures. Several ideas, strategies, and insights shared in this section, indicate how parents learn implicitly through discussions with the IEP teams and other sources of information they had found to help their child.

**Summary of Navigating Special Education Theme**

Overall there were several examples of how parents managed the maze of information. They were planful and sometimes strategic in their approaches. They sought help from a variety of sources, (e.g., parent advocacy agencies, private therapists, and private schools). Regarding the use of the Internet to search for online resources, parents mentioned either using specific parent websites to get articles or research posted. Some parents were neutral about the use of online resources. Some used Internet regularly could name sites readily and could articulate the level of information and how it would be helpful to them and others if used for quick retrieval of general information. Others felt using online resources were not helpful, overwhelming, and time-consuming.

As parents were navigating through special education services, parents overall commented on their need for additional information and expressed their frustrations with public schools and the lack of assistance regarding important special education services (e.g., evaluation, intervention development, and implementation). Parents reported initial trust with educators, but then a loss of trust and a need to fight through barriers. They also reported that they did not have information to help them make decisions as a member of the IEP team. Most
parents sought assistance from other sources of information than from schools, commenting that outside public-school sources were vital to helping them to learn about the complex nature of special education information. Most reported how their knowledge and skills increased from these experiences which helped them later problem solve other issues and concerns. A few parents began to bring that information to the team to begin to build or re-build relationships with the school team. The next section will describe in detail the ways in which participants shared, collaborated, and became advocates for their children.

**Sharing, Collaborating, and Advocating to Learn**

The third major theme included parent viewpoints that centered on their informal learning while sharing and collaborating with others. This theme also encompasses the culmination and application of learning as parents served in a leadership role. Parents shared topics, strategies, and insights learned over years of seeking information to help their child. Parents also shared lessons learned over time with other parents who saw them as a source of information. As mentioned in the previous theme, parents shared incidental learning experiences where they mentioned learning through trial and error; the path was nonlinear and often haphazard. Examples of learning through reflection and action were also evident. Particularly for this theme, parents’ informal learning was associated with the learning of others and the desire to continue to learn at a different level and engage in larger education contexts with groups, communities, or legislative collaborators.

**Developing A Leadership Role**

The first subcategory of the third major theme encompasses parents’ comments on their informal learning and developing more of a leadership role about their child’s education. Some parents reported that other parents approached them to ask specific questions to help them know
what to do for their child. Findings included parent reflections on their learning after helping others, specifically about how to navigate the hidden or underlying intent schools may have had.

**Sharing lessons learned.** One parent Kristen indicated that she had been sharing to help other parents learn about special education for many years: She said that she “would share with other parents… teachers put information in other kids’ bookbag, the advocacy…yeah, yeah.” Kristen mentioned her role with an advocacy group,

I'm a volunteer educator with them. I’m on, on [the] health side, H2H, and on the educational side, but whatever people tell me …they were looking for parents, trying to get parent leaders, they had various parent leader programs. So, I signed up with them there was no one who had raised a child like (daughter’s name) there was no one for whom I could go. I always knew that we weren't given (daughter’s name) just to raise (daughter), that there was this bigger issue…I didn't know exactly what it was…so, I am always trying to inspire and share my story, as she was not just given to us to keep her alive. I am still not really clear on what that is, but I need to take advantage of whatever opportunities that I have for the broader community. I will join the parents who want to move toward inclusion for their child…I know they don’t think she can do much as I do……they seem extreme asks.

Ruth took the opportunity to share information wherever and whenever she could:

I am a big advocate of that (sharing information), yes, you can read the books, and yes you can go to formal workshops and trainings but learning from other parents…I think it's because of that support piece. You are talking to someone who has walked in the
same shoes that you have walked in....there is some level of trust there that is instantly
developed.

Amy empathized with other parents in that she felt alone when searching for information, and then recognized how much she valued support and learned from other parents:

You’re just trying to put the puzzle pieces together, without realizing you [are] going to a
deeper level, but sometimes if you had a person to hold your hand, help you understand things, it would be easier. I think that is what a parent network should be; ya know it would just be a little bit more.

**Source of information.** Some parents felt that they were viewed by others as a source of information and talked about resources they had developed for others’ benefit. For example, Louise, from the knowledge she gained, had expanded her ability to plan for helping parents address their child’s needs even if they are not the same needs as her daughter:

Here is my newest passion. I have like 50 topics in my head…its universal design for instruction (UDL) for learning…Yes, and it's modeled for them (parents), and then they can experience, and they can replicate it…I love, right there more resources and things to look at, this is so key, helping the kids that maybe aren't identified, they don't present, kinda like my daughter, she doesn't present in a way, but she has so many deficits, that's where we're gonna catch those kids, and maybe and even if all these other things don't work.

Ruth discovered new insights into peer mentorship to support parents who experienced barriers to learning and how she helped them:

So, I do think there are some parents, for whatever reason, it might be, just… that they don't have the time to invest. That is why I was led down a different career path. I could
do all this research and do volunteer time at school and bring in all of the lawyers, even if they don't have … even if they don't have resources...I had the resources of time, finances, and a flexible job to allow me to do that some parents may not have the resources or time. This is what parents tell other parents now. That is where the peer to peer mentorship…because that is what, you read your book…well I would say the Wrights Law gets to that. The Emotions to Advocacy book, that is where I learned some of this is how much you know, and some is how much you know how to collaborative and move those dynamics of a team, so put that resources aside, but most of the resources are … this is the law… if this doesn’t work that way you have procedural safeguards. Blah blah blah very dry...but then you talk to another parent, and the parent is almost the one who gives you the ins and outs when it was happening at the school level...that team member can be an asset. So parents are willing to help another parent get to that spot a lot faster, or I'll check your email for ya, don't send that email, we do that for each other or let me read, you’re frustrated right now. Don't send that email.

A few parents discussed other resources and innovations that demonstrated the extension of parents’ learning. Kelli, for example, shared:

A newsletter, I just finally found someone to do that. Pushes out ton of knowledge and events, 13 chapters, now hold parent meetings, pull in a speaker, so many resources, parents are their own best resources to each other.

The section encompasses how some parents used and applied the knowledge, skills, and attitudes sharing the lessons they learned and becoming a source of information for other parents. There were several methods parents used, including volunteering services and joining others for advocacy work. A few had been sharing their knowledge through content dissemination or
discussions, and peer-to peer-mentorship for many years. The next section will detail the paths some of those parents took toward action on a larger platform.

**Paths of Advocacy**

Parents’ comments on how knowledge led them to advocacy and collaborating at a higher level of support were plentiful. Parents’ learning to be advocates started with leadership roles and developed into starting their parent organizations and collaborating with families. They found themselves working with state legislators to make more systemic change for larger numbers of parents. Barbara shares about her state advocacy work:

At our state [special education] level, it is completely changed; um… our state is very aware of what is going on…but that is because for six years we have been in close communication with them…built relationships with them, very tight relationships with them, and that was our goal here. Our goal was not to shove legislation down their throats… So, we knew that was the route to follow.

Some parents began to lead meetings, had organized parent groups, and worked with private businesses to help other parents. While discussing advocacy work it was apparent that parents were drawing from their previous professional knowledge and skill sets, integrating the knowledge with special education learning to benefit more parents and their children. Donna shares:

So I have told people before, my light switch does not go off and on....the advocating for your child is how I am for my child...that’s just how I’m made and what makes me the person I am, the first thing I do, is I go to the Internet, the blogs that could be out there, go through and deduce what I can so that it is palatable for the …the assumption that everyone is not at your level...so if I can say Ed, IEP, OHI (acronyms) [or not]. We just
started mom’s support group this year. Just had our first meeting in February...set topics to discuss, a schedule for the remainder of this calendar year...always know we had a purpose. We had already outgrown the space ...already told her that once we start this and we are putting it out there on social media...on Listserv etc. They will tell friends. So, I think our largest group thus far we had about 17 women in one groups. Of course we had to go to a larger room...we had to go to a larger conference room…so it has been very interesting. To impart on people of what I know about what is going on both sides...also what is going on in the world today...give them tools to empower them…been able to identify who may need more.

Other parents began to connect with organizations that were not affiliated with their child’s school but were regionally located. They appreciated meeting with similar-minded parents working for special education regulation change, and they brought their talents to the process. Kelli realized that,

It is legislation…I came to do legislation [work]. I was an international studies major, which is also very boring …and an econ minor so…I always like politics and how it worked. So, I could learn about it, and then be a reporter and complain about them (laughs)...reporting is hard work, hard work, you have to a compartmentalized person, then use it against them if that is what the article is about. Plus being in op ed… you have to turn a phrase, so, worked on capitol hill. Unpaid then moved up. I can write research doing committee work. I worked on Capitol Hill.

Kelli added how other work she had done and her reflections on that work was valuable in increasing her knowledge:
We (organization parent created) created one of our state (legislative) bills…MTSS…multi-tiered systems of support, starting with screening. It was quite a leap actually [to get to this topic]…our Bill did not include behavior; we are preventing behavior, so we did not include [it].

A few parents talked about the expertise they developed in advocacy work and their new roles as advocates. Ruth stated:

When I was at the (state organization), my role was as a parent group specialist, so I worked on a grant with the (state) Dept. of Ed. (State) has a law that every school district has to have a parent advisory group for special ed, so I had 3 counties. So I would help those districts get groups get off the ground. I was also allowed to work on disability specific group. So, I was contacted by parents who wanted to start a group for learning disabilities. So, it was multiple schools from the district… we started the dyslexia support group in (state), and all we started with was a Facebook page.

We had legislation to put a task force, the governor asked the state to study dyslexia for one year. Let's get parents to share their stories, and make sure the task force gets all the info they need. So, it (sharing information) kind of started with states with Facebook pages.

Other parents discussed their self-efficacy and sense of empowerment after being involved in special education related parent organizations at the local level. Parents who had considered themselves shy were now getting involved with various levels of special education advisory and advocacy efforts. George self-disclosed his reading challenges and was applying these lived experiences by meeting with legislators to draft the next state dyslexia bill.
I would say that a lot of different groups just turned into advocacy for my own issue because I know there is a lot of kids going through the same thing. (name) County just started to teach kids to read. I like to talk to people. [We] went to speak to (name). [A] Task force letter. Kind of put efforts to that in my spare time, looking into laws more and kind of writing Senator (name). Just saw him the other day. He got my testimony to the Ways and Means Committee the other day. So, I chose to get involved with policy writing...if everything passed, I got twice exceptional added to the (state) law.

**Summary of Sharing, Collaborating, and Advocating to Learn Theme**

The third theme illuminated how parents began to share resources, advocate for others, and develop leadership skills. Parents were applying the information they had learned from the beginning of their learning path and reported they were learning from parents who requested their assistance. Parents shared their sense of empowerment and insights learned after they had assisted parents through the IEP process. Parents shared about their work in advocacy and leadership roles and a desire to continue this work. Some parents had already initiated parent organizations or small discussion groups revealing how their previous knowledge and expertise from their prior lives help to leverage new contributions to the advocacy efforts to benefit others.

**Chapter Summary**

This chapter provided an overview of the qualitative findings of this study. Based upon these findings three major themes emerged. These included a) realizing a need to learn which encompassed a time or event, self-reflection and subsequent intentionality and forethought, interpreting new experiences and accepting the need to learn; b) navigating special education; which focused on parents’ learning complex information through a nonlinear path. Also, it included trusting the schools but losing that trust after interacting during meetings, then
rebuilding and fostering connections after reflection, changing perspectives and adjusting ideas or beliefs, and moving on to make connections for the benefit of their child; c) sharing, collaborating, and advocating which included parents’ sharing lessons learned with other parents, serving as a source for information for other parents, and a few learning to integrate their new learning with prior knowledge to become advocates or play significant role in advocacy related activities.

These findings provided a foundation for the development of the quantitative portion of this study, which was the distribution of a survey to a larger population of parents meeting the same criteria as those interviewed. Chapter Five discusses how these findings informed the development of the survey and shares findings of the survey research.
CHAPTER FIVE

QUANTITATIVE FINDINGS

The purpose of this research study was two-fold: a) to explore parents’ informal learning about special education, and b) to investigate the relationship between parents’ informal learning and parent involvement. In line with the purpose of this study, the same two primary research questions guided the quantitative portion:

1) How do parents learn informally about the special education process?

2) What is the relationship between parents’ informal learning and parent involvement?

A sequential exploratory mixed methods research design explained in Chapter Three, supported this study (Johnson, 1995; Teddlie & Tashakkori, 2009) and addressed research questions using both qualitative and quantitative methods, beginning with the qualitative phase, followed by the quantitative phase (Creswell, 20015; Greene et al., 1989).

The weight or emphasis for this study was on the first, exploratory, qualitative phase (QUAL → quan) (Creswell et al., 2003), so that a deeper understanding of parents’ informal learning about special education and the relationship between informal learning and parent involvement could be explored first through ten semi-structured interviews, discussed in Chapter Four. The second, quantitative phase, detailed in this chapter, addressed the research questions as they applied to a larger audience, which both verified or confirmed, and offered more potential for some generalizability of the findings.

Review of Qualitative Findings

To contextualize the quantitative findings, a brief review of the qualitative findings from Chapter Four is provided below to contextualize the quantitative findings. Parents, through their
interview responses, revealed three common themes from their experiences learning about special education:

1) Realizing a need to learn, which encompassed:
   a. Self-examination,
   b. Reflection on adjustments realized, and
   c. Accepting the need to learn;

2) Navigating special education, which included:
   a. Learning complex information through a nonlinear path,
   b. Using online, face-to-face, or other sources of information to learn about special education,
   c. Trusting schools, losing trust, and building connections after reflection, and
   d. Adjusting and moving forward for the benefit of their child; and

3) Sharing, collaborating and advocating to learn, including:
   a. Parents’ sharing lessons learned with other parents,
   b. Serving as a source for information for other parents and educators, and
   c. Integrating learning with prior knowledge to advocate for change for a larger population of parents/children and in different contexts.

The quantitative survey development utilized the themes that emerged from the data collected during the qualitative phase, yielding a typology, or set of substantive categories, consistent with the sequential exploratory research design. This typology served as a framework for the quantitative survey development. In the next section, I discuss the conceptual and theoretical frameworks that guided the development of the survey.
Using Qualitative Data to Guide Quantitative Collection

Tashakkori and Teddlie (1998) suggest that qualitative data may be “quantized” by counting occurrences of themes, or codes associated with themes, such that qualitative codes are transformed into numerical codes that can be represented statistically, allowing for further exploration of the data. The data conversion, also called transformation (Teddlie, & Tashakkori, 2009), revealed the axial nodes and subtheme nodes recorded in NVivo (see Appendix C). The survey questions (see Appendix C) addressed each of the major themes and sub-themes, which varied in number based on the number of nodes for that theme. Listed below are each theme identified and number of questions:

1. a need to learn (6),
2. parent’s self-directedness (4),
3. face-to-face/discussion (7),
4. online (9),
5. written materials (1),
6. additive or learning informally during more structured learning contexts (2),
7. IEP discussion to learn about special education processes (3),
8. IEP discussion to learn about the IEP team (5),
9. building and fostering connections with IEP team (3), and
10. sharing to learn and leadership (7).

Qualtrics distributed the survey through listservs utilized by parents of children with special needs. While the number of individuals who received the survey is unknown because of the distribution method, described in detail in Chapter Three, a total of 122 respondents completed the 47-question survey.
Quantitative Data Analysis

Descriptive analysis, including frequencies, means, standard deviations, and variance, were generated as a function of a Qualtrics survey report with additional data analysis accomplished using SPSS v. 25 software. Transformed coded themes were compared to transformed quantitative data scores. Numeric values of (1) were assigned to each response and entered as raw data into SPSS v. 25 which maintained accurate transformation of data to SPSS. Quotes or specific comments taken from qualitative data were matched to the statistical data findings to avoid illogical comparisons during qualitative and quantitative data analysis. Finally, the distribution of scores were examined, using standard statistical analysis tests, to avoid inappropriate statistical analysis procedures (Creswell & Plano Clark, 2011; Field, 2013; Teddlie & Tashakkori, 2009).

Parents answered 47 survey questions using a five-point Likert scale ranging from (1) definitely agree to (5) definitely disagree and a series of demographic questions (see Appendix C). Ratings of ‘definitely agree’ was a positive finding. Three questions were worded in such a way that ‘definitely agree’ was a negative finding; those items were recorded to ensure that scores of 1 were consistently positive. To provide an opportunity for participants to share any additional information about their experiences as a parent of a child receiving special education services and open ended item was added at the end of the survey. There was a total of 10 comments used to complement or contradict other survey findings.

The first 47 questions or items were grouped to establish scales to represent central constructs. Each subscale included the following numbered questions:

1. Subscale (1), realizing a need to learn, questions 1-6;
2. Subscale (2), navigating special education, questions 7-40; and
3. Subscale (3), sharing to learn which grouped, questions 41-47.

Scale reliability analysis is the measure indicating how the survey items consistently reflect the construct that is to be measured (Field, 2013). These calculations were completed using “the most common measure of scale reliability, Chronbach’s Alpha α” (Field, 2013, p. 708). The acceptable cut-off for Chronbach’s Alpha is >.70 for a set of variables to be considered a scale. If the result was ≤.70, the scale was abandoned, and further evaluations were conducted between the individual construct measures and other variables. Next, Pearson correlations were computed between items, between items and scales, and between scales. Correlations were considered significant if p ≤.05. Further analyses were done to determine if demographic characteristics correlated to survey items. These computations were done by using a one-way between subjects analysis of variance (ANOVA) to compare two or more groups. Levels of ≤.05 were considered a significant finding.

**Presentation of the Findings**

In the next four sections, I will discuss the quantitative findings. The first section provides a thematically organized descriptive analysis of answers to the survey questions, open-ended comments as they pertained to the themes, and a summary of overall descriptive findings. The second section reviews correlation analyses or tests conducted to identify relationships between parents’ informal learning factors and their perceived parent involvement. Section three provides an analysis of parents’ views of their informal learning and involvement when compared to demographic information, and the concluding section provides a summary of the quantitative findings.
**Description of Sample**

Respondents for this survey were parents of children receiving special education services for a minimum of three years. They were at least 25 years old and lived in the Mid-Atlantic region of the U.S.

**Demographics characteristics of parent sample.** Table 2 below provides a summary of findings for participant demographics by sex, age, race/ethnicity, income, and education attainment.

Table 2

*Parent Demographic Characteristics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sex</th>
<th>Age</th>
<th>Race/Ethnicity</th>
<th>Income</th>
<th>Education Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N=121)</td>
<td>(N=120)</td>
<td>(N=119)</td>
<td>(N=114)</td>
<td>(N=121)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>119</td>
<td>98.35%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>1.65%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-34 yrs. old</td>
<td>7</td>
<td>5.83%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-44 yrs. old</td>
<td>43</td>
<td>35.83%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-54 yrs. old</td>
<td>60</td>
<td>50.00%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55-56 yrs. old</td>
<td>10</td>
<td>8.33%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American/Black</td>
<td>5</td>
<td>4.20%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alaskan Native</td>
<td>0</td>
<td>0.00%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>84%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>7</td>
<td>5.88%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>0</td>
<td>0.00%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>101</td>
<td>84.87%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>4.20%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000-50,000</td>
<td>27</td>
<td>22.08%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50,000-100,000</td>
<td>36</td>
<td>31.58%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100,000-150,000</td>
<td>20</td>
<td>17.54%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150,000 – Above</td>
<td>31</td>
<td>27.19%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Attainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>4</td>
<td>3.31%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>14</td>
<td>11.57%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-year College w/degree</td>
<td>14</td>
<td>11.57%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-year College w/degree</td>
<td>42</td>
<td>43.71%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Degree</td>
<td>40</td>
<td>33.06%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctorate</td>
<td>7</td>
<td>5.79%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Most respondents were White (101), females (119), and the majority were aged 45-54 (60) or aged 35-44 (43). Of 121 parents, 42 held a four-year degree and 40 held some type of professional degree. Of 114 responses 27 parents indicated a household income of $10,000-50,000, 36 from $50,000-100,000, 20 from $100,000-150,000, and 31 of people reported a household income of $150,000 or higher, indicating a slightly higher percentage of parents from household incomes of $50,000-100,000.

**Demographic characteristics of child-related data.** Next, Table 3, on page 189, provides the total numbers and percentages of the child-related demographics provided by parent participants followed by an interpretation of the data.
Table 3

*Child Related Demographics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (#)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Disability (N=121)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBI - Traumatic Brain Injury</td>
<td>2</td>
<td>1.65</td>
</tr>
<tr>
<td>HI/DHH - Hearing Impaired/Deaf/Hard of Hearing</td>
<td>3</td>
<td>2.48</td>
</tr>
<tr>
<td>SLD - Specific Learning Disability</td>
<td>45</td>
<td>26.19</td>
</tr>
<tr>
<td>ID - Intellectually Disabled</td>
<td>6</td>
<td>4.96</td>
</tr>
<tr>
<td>OI - Orthopedically Impaired</td>
<td>1</td>
<td>0.83</td>
</tr>
<tr>
<td>ED - Emotionally Disturbed</td>
<td>2</td>
<td>1.65</td>
</tr>
<tr>
<td>SLI - Speech and Language Impaired</td>
<td>5</td>
<td>4.13</td>
</tr>
<tr>
<td>MULTIPLE Multiple Disabilities</td>
<td>12</td>
<td>9.92</td>
</tr>
<tr>
<td>AUTISM - Autism</td>
<td>41</td>
<td>33.88</td>
</tr>
<tr>
<td>OHI - Other Health Impaired</td>
<td>8</td>
<td>6.61</td>
</tr>
<tr>
<td>OTHER - Two or more or Developmental Delays</td>
<td>9</td>
<td>7.44</td>
</tr>
<tr>
<td>Child Grade (N=121)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td>15</td>
<td>12.40</td>
</tr>
<tr>
<td>Fourth</td>
<td>10</td>
<td>8.26</td>
</tr>
<tr>
<td>Fifth</td>
<td>16</td>
<td>13.22</td>
</tr>
<tr>
<td>Sixth</td>
<td>16</td>
<td>13.22</td>
</tr>
<tr>
<td>Seventh</td>
<td>10</td>
<td>8.26</td>
</tr>
<tr>
<td>Eighth</td>
<td>7</td>
<td>5.79</td>
</tr>
<tr>
<td>Ninth</td>
<td>9</td>
<td>7.44</td>
</tr>
<tr>
<td>Tenth</td>
<td>5</td>
<td>4.13</td>
</tr>
<tr>
<td>Eleventh</td>
<td>6</td>
<td>4.96</td>
</tr>
<tr>
<td>Twelfth</td>
<td>3</td>
<td>2.48</td>
</tr>
<tr>
<td>Twelfth Plus</td>
<td>5</td>
<td>4.13</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>15.70</td>
</tr>
</tbody>
</table>

Most parents indicated their child’s disability category as a specific learning disability (26.45%) or autism (33.88%). The next highest category was multiple disabilities (9.92%). Nine parents indicated “other,” which theoretically represented children with developmental delays or two or more disabilities (e.g., Autism and Speech and Language impairments).

Regarding the child’s grade in school, at the time of the interviews, most children (74) or 55.00% were in third through eighth grades, with 23.00% from high school or older educational programming for students up through age 21. There were 19 parents who reported their child as “other.” These responses may have reflected children who were currently in kindergarten, first or second grade, as these grades were not options for individual selection. Therefore, this set of
parents had children who were most likely identified with disability at a younger age (e.g., three to five years old) and parents would have met criteria inclusion by having been involved in disability services for the minimum of three years.

**Analysis of Scale: Construct Reliability**

As described above, Chronbach’s Alpha calculated scale and subscale reliability, with the acceptable cut-off at >0.70. If the alpha score was not an acceptable at >0.70, the subscale was not created, and if any further evaluations were conducted with the items from that subscale, they were done between the individual construct measures and other variables. Table 4 on page 123 describes reliability statistics.

Table 4

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronbach’s Alpha</td>
<td>N of items</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.793</td>
<td>47</td>
</tr>
<tr>
<td>Subscale 1</td>
<td>0.162</td>
<td>6</td>
</tr>
<tr>
<td>Subscale 2</td>
<td>0.757</td>
<td>34</td>
</tr>
<tr>
<td>Subscale 3</td>
<td>0.784</td>
<td>7</td>
</tr>
</tbody>
</table>

As presented in Table 4 construct reliability for the Total scale with 47 items was (α=0.793) and was deemed acceptable as internally reliable. Construct reliability testing for each subscale, or group of variables, revealed Realizing a Need to Learn subscale one with 6 items (α= 0.162), Navigating Special Education subscale two with 34 (α=0.757), and Sharing to Learn subscale three with 7 items (α=0.784). Subscale one was not deemed acceptable and was not used as a subscale for further analysis and any further tests were done between the individual construct measures and other variables or group of variables. Both Navigating Special Education
(subscale two) and Sharing to Learn (subscale three) met acceptable levels, and so these subscales were used for further analyses when investigating correlations between variables.

**Descriptive Statistics Analysis**

Descriptive statistics, including frequencies, means, standard deviations, variance, and correlations, provide an understanding of the data, as a whole, how the individual items are related to the whole, and related to each other. Presented next, are the findings for all 47 items by number and frequency of responses. Note that, for clarity, the presentation of the findings will address responses by opinion group: agree (includes agree and definitely agree responses), neutral, or disagree (includes disagree and definitely disagree responses). At the same time, the tables detail findings for each opinion category and specify each category. As mentioned, open-ended responses taken from the final survey item that relate to the grouped variables were included in discussions for those items. Appendix D includes all survey questions.

**Realizing a need to learn.** The first six questions were posed to further investigate the first theme of qualitative findings. Table 5 on page 192 presents the means and standard deviations for Q1-Q6, and indicates how the participants responded, as a whole, to these questions using the Likert scale (1) definitely agree, (2) agree, (3) neither agree or disagree, (4) disagree, (5) definitely disagree.
Table 5

Descriptive Statistics, Q1-Q6

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>3.38</td>
<td>1.31</td>
</tr>
<tr>
<td>Q2</td>
<td>2.97</td>
<td>1.38</td>
</tr>
<tr>
<td>Q3</td>
<td>3.02</td>
<td>1.27</td>
</tr>
<tr>
<td>Q4</td>
<td>3.81</td>
<td>1.14</td>
</tr>
<tr>
<td>Q5</td>
<td>1.53</td>
<td>0.90</td>
</tr>
<tr>
<td>Q6</td>
<td>2.42</td>
<td>1.26</td>
</tr>
</tbody>
</table>

Table 6 presents detailed findings for the first six questions, all of which targeted the constructs of parent self-examination, formulating a plan, and accepting the need to learn.

Table 6

Realizing A Need to Learn by Number/Percentage

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree 1</th>
<th>Agree 2</th>
<th>Neither Agree nor Disagree 3</th>
<th>Disagree 4</th>
<th>Definitely Disagree 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>120</td>
<td>13/10.83%</td>
<td>24/20.22%</td>
<td>13/10.83%</td>
<td>44/36.67%</td>
<td>26/21.67%</td>
</tr>
<tr>
<td>Q2</td>
<td>120</td>
<td>22/18.33%</td>
<td>34/28.33%</td>
<td>6/5.00%</td>
<td>42/35.00%</td>
<td>16/13.33%</td>
</tr>
<tr>
<td>Q3</td>
<td>122</td>
<td>17/13.93%</td>
<td>29/23.77%</td>
<td>29/23.97%</td>
<td>29/23.97%</td>
<td>18/14.75%</td>
</tr>
<tr>
<td>Q4</td>
<td>122</td>
<td>5/4.10 %</td>
<td>15/12.30%</td>
<td>18/14.75%</td>
<td>44/36.07%</td>
<td>40/32.79%</td>
</tr>
<tr>
<td>Q5</td>
<td>122</td>
<td>81/66.39%</td>
<td>26/21.31%</td>
<td>7/5.74%</td>
<td>7/5.74%</td>
<td>1/.82.00%</td>
</tr>
<tr>
<td>Q6</td>
<td>122</td>
<td>34/27.87%</td>
<td>42/34.43%</td>
<td>16/13.11%</td>
<td>21/17.21%</td>
<td>9/7.38.5%</td>
</tr>
</tbody>
</table>

Findings from Q1 revealed that many of the parents (58.34%) did not have a clear picture of what to do when they learned about their child’s diagnosis or struggles at school. When asked if they relied primarily on their child’s school to inform them about what to do next (Q2),
48.33% of parents agreed and nearly the same percentage of parents, 46.66%, disagreed. When parents were asked if they relied primarily on their IEP team to inform them about the school aged special education process (Q3), there were mixed results, with about 24.00% agreeing with this question, 24.00% disagreeing, and the remaining 24.00% responding that this question did not apply to them. When probing about assistance from schools (Q4), 74.08% (84 of 122) disagreed that schools provided enough information so they could request a special education evaluation. Parents (87.70%) also indicated that they needed more information than what the school provided to them after the special education evaluation was completed (Q5). When asked about accessibility across language, physical, and cost barriers (Q6), 57.30 % indicated they usually experienced one or more barriers to parent trainings, special education conferences, and parent events.

An open-ended comment from one of the parents indicated that schools tend to provide as little information as possible about the special education process. Another comment offered additional insights on realizing a need to learn:

Because I saw the lack of clear information to parents and because I was not always taken seriously, I went back to school and got master’s certification in ASD (autism spectrum disorders). I now work in a school district. I find that many people running IEP meetings aren’t clearly trained in how to write IEP’s and parents do not know the questions to ask.

Another parent commented on how much they had to accomplish once they realized a need to learn, and stressed that, advocating for my child’s right to attend public school in the general education setting has been one of the biggest battles of my life. My children have a right to FAPE and an
inclusive education, yet many educators have a pull-out mindset. In my school district, my first experience with my child’s school, the only setting offered was Sp[ecial] Ed[ucation] classroom. I didn’t know better, so we agreed. When you know better, you do better.

Next, I will share a discussion on the next set of variables with descriptive statistics and response percentages for the next group of questions.

Navigating special education: self-directedness. The next several questions probed parents’ self-directedness: seeking information on their own, navigating complex information on their own, identifying IEP intervention information and developing creative ways to work with the IEP team. Table 7 presents the means and standard deviations for Q7-8, 36, and 38, which show how the participant group, as a whole, answered the questions using the Likert scale (1) definitely agree, (2) agree, (3) neither agree or disagree, (4) disagree, (5) definitely disagree.

Table 7

Descriptive Statistics Q7-Q8, Q36, Q38

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7</td>
<td>1.39</td>
<td>0.63</td>
</tr>
<tr>
<td>Q8</td>
<td>2.08</td>
<td>1.18</td>
</tr>
<tr>
<td>Q36</td>
<td>1.60</td>
<td>0.62</td>
</tr>
<tr>
<td>Q38</td>
<td>2.46</td>
<td>1.14</td>
</tr>
</tbody>
</table>
Table 8 provides a more detailed picture of the ways in which the parent participants responded to the questions about navigating the world of special education.

Table 8

*Navigating Special Education by Number/Percentage*

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Definitely Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Definitely</td>
<td>Agree</td>
<td>Neither Agree nor Disagree</td>
<td>Disagree</td>
<td>Definitely Disagree</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Definite</td>
<td>Agree</td>
<td>Neither Agree nor Disagree</td>
<td>Disagree</td>
<td>Definitely Disagree</td>
</tr>
<tr>
<td>Q7</td>
<td>122</td>
<td>83/68.03%</td>
<td>33/27.05%</td>
<td>4/3.28%</td>
<td>2/1.64%</td>
<td>0/0.00%</td>
</tr>
<tr>
<td>Q8</td>
<td>122</td>
<td>53/43.44%</td>
<td>31/25.41%</td>
<td>15/12.30%</td>
<td>21/17.21%</td>
<td>2/1.64%</td>
</tr>
<tr>
<td>Q36</td>
<td>121</td>
<td>68/56.20%</td>
<td>37/30.58%</td>
<td>14/11.57%</td>
<td>1/0.08%</td>
<td>1/0.08%</td>
</tr>
<tr>
<td>Q38</td>
<td>121</td>
<td>27/22.31%</td>
<td>41/33.88%</td>
<td>29/23.97%</td>
<td>18/14.88%</td>
<td>6/4.96%</td>
</tr>
</tbody>
</table>

The majority percent of parents (95.00%) indicated they routinely set aside time to learn on their own about their child’s disability, assessments, interventions, parental rights, or the special education process (Q7). When asked if parents developed a structured plan to follow for themselves to identify opportunities for learning (Q8), many responses (68.00%) were positive. As experienced and knowledgeable as these parents were, 86.78% of them agreed that they needed to continue to be self-directed in their learning to identify next steps to their child’s IEP program implementation (Q36). Parents also indicated (57.19%) that they learned and developed ways to work creatively (e.g., data charts, trials, cost saving resources) with the IEP team (Q38).

Next, I will share a description of the next set of variables in addition to descriptive statistics and response percentages for the next group of questions.

**Learning through face-to-face discussion.** To explore face-to-face discussion as a way of learning informally about special education, Q9, 12-14, and 23-25 were formulated. Descriptive statistics are found in Table 9 on page 196 which represents the participant group, as
a whole, and how they answered using the Likert scale (1) definitely agree, (2) agree, #3) neither agree or disagree, (4) disagree, (5) definitely disagree.

Table 9

Descriptive Statistics Q9, Q12-Q14, Q23-Q25

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q9</td>
<td>3.43</td>
<td>0.98</td>
</tr>
<tr>
<td>Q12</td>
<td>2.64</td>
<td>0.90</td>
</tr>
<tr>
<td>Q13</td>
<td>2.63</td>
<td>0.99</td>
</tr>
<tr>
<td>Q14</td>
<td>2.68</td>
<td>0.88</td>
</tr>
<tr>
<td>Q23</td>
<td>2.80</td>
<td>1.00</td>
</tr>
<tr>
<td>Q24</td>
<td>2.79</td>
<td>0.96</td>
</tr>
<tr>
<td>Q25</td>
<td>2.87</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Outlined in Table 10 on page 197 are findings from questions regarding face-to-face interactions with others, and information or insights gained specifically from or during the IEP meetings.
Table 10

*Face-to-Face Discussion by Number/Percentage*

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree 1</th>
<th>Agree 2</th>
<th>Neither Agree nor Disagree 3</th>
<th>Disagree 4</th>
<th>Definitely Disagree 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q9</td>
<td>122</td>
<td>6/4.92%</td>
<td>15/12.30%</td>
<td>32/26.23%</td>
<td>58/47.54%</td>
<td>11/9.02%</td>
</tr>
<tr>
<td>Q12</td>
<td>122</td>
<td>10/8.20%</td>
<td>46/37.7%</td>
<td>47/38.52%</td>
<td>16/13.11%</td>
<td>3/2.46%</td>
</tr>
<tr>
<td>Q13</td>
<td>122</td>
<td>11/9.02%</td>
<td>44/36.07%</td>
<td>47/38.52%</td>
<td>19/15.57%</td>
<td>1/0.82%</td>
</tr>
<tr>
<td>Q14</td>
<td>121</td>
<td>10/8.26%</td>
<td>41/33.88%</td>
<td>50/41.32%</td>
<td>18/14.88%</td>
<td>2/1.65%</td>
</tr>
<tr>
<td>Q23</td>
<td>120</td>
<td>13/10.83%</td>
<td>33/27.50%</td>
<td>42/35.00%</td>
<td>29/24.17%</td>
<td>3/2.50%</td>
</tr>
<tr>
<td>Q24</td>
<td>120</td>
<td>11/9.17%</td>
<td>35/29.17%</td>
<td>44/36.67%</td>
<td>28/23.33%</td>
<td>2/1.67%</td>
</tr>
<tr>
<td>Q25</td>
<td>120</td>
<td>9/7.50%</td>
<td>38/32.67%</td>
<td>36/31.67%</td>
<td>34/28.33%</td>
<td>3/2.50%</td>
</tr>
</tbody>
</table>

When asked if parents pursued information, initially, through face-to-face discussion with other parents (Q9), 56.56% disagreed, 26.00% were neutral, and 17.22% agreed. Parents agreed (45.97%) that discussion with other parents provided a way for them to be more reflective on topics (Q12), while 45.09% of parents found face-to-face discussion to be beneficial for rethinking or adjusting their understanding (Q13), when compared to other ways they use to learn about special education information (e.g., written documents, Internet resources, social media, research articles). Furthermore, for Q14, 42.14% of parents agreed that talking face-to-face with another parent provided a way to apply the information they learned in a more meaningful way. One parent, however, expressed their difficulty with meeting other parents: “I do not feel I have the access to meet face-to-face with other parents as my daughter has a condition that affects 1 in 2 million.” This might have motivated this parent to utilize teachers more than parents as sources for information.
Questions 23 to 25 probed face-to-face discussion as a way of learning informally about special education, in comparison to other ways of learning (e.g., emails, written, social media, face-to-face with other parents). Parents revealed mixed findings about talking with their child’s teacher as a catalyst for reflection (Q23): 35.00% were neutral, 28.00% agreed, and 24.00% disagreed. (Q 24) Equally mixed, parents found the insightful information about special education from face-to-face conversations with their child’s teacher to be: helpful (29.17%), not helpful (23.33%), or neither helpful nor unhelpful (36.67%). However, on the other hand, parents also indicated that, through face-to-face discussion with teachers, they were able to apply information to their child’s program: 49.17% agreed, 30.00% were neutral, and 28.33% disagreed.

Next, I will describe the next category of variables along with descriptive statistics and response percentages for the next group of questions.

**Online use.** Questions about online use explored further how parents accessed the Internet and for what purposes. Also, the use of social media and parents’ online discussions of special education topics was investigated to learn about parents’ learning through reflection, changes in perspective, or if parents used or applied information to their child’s educational program. Lastly, one question probed the use of email as a method of learning and insights or information gained from their child’s teacher. Table 11 on page 199, provides descriptive statistics which represents the participant group, as a whole, and how they answered using the Likert scale (1) definitely agree, (2) agree, (3) neither agree or disagree, (4) disagree, (5) definitely disagree.
Table 11

*Descriptive Statistics Q11, Q15-Q22*

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q11</td>
<td>1.71</td>
<td>0.80</td>
</tr>
<tr>
<td>Q15</td>
<td>2.65</td>
<td>1.27</td>
</tr>
<tr>
<td>Q16</td>
<td>4.44</td>
<td>0.79</td>
</tr>
<tr>
<td>Q17</td>
<td>1.46</td>
<td>0.59</td>
</tr>
<tr>
<td>Q18</td>
<td>2.39</td>
<td>1.19</td>
</tr>
<tr>
<td>Q19</td>
<td>2.82</td>
<td>1.00</td>
</tr>
<tr>
<td>Q20</td>
<td>2.74</td>
<td>0.83</td>
</tr>
<tr>
<td>Q21</td>
<td>2.83</td>
<td>0.94</td>
</tr>
<tr>
<td>Q22</td>
<td>2.02</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Table 12 on page 200, presents findings by number and percentages of responses for online use and social media.
### Online Use: Responses by Number/Percentage

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Definitely Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q11</td>
<td>122</td>
<td>56/45.90%</td>
<td>51/41.80%</td>
<td>9/7.38%</td>
<td>6/4.92%</td>
<td>0/0.00%</td>
</tr>
<tr>
<td>Q15</td>
<td>122</td>
<td>28/22.95%</td>
<td>39/31.97%</td>
<td>7/5.74%</td>
<td>44/36.07%</td>
<td>4/3.28%</td>
</tr>
<tr>
<td>Q16</td>
<td>122</td>
<td>1/0.082%</td>
<td>3/2.46%</td>
<td>8/6.56%</td>
<td>39/31.97%</td>
<td>71/58.20%</td>
</tr>
<tr>
<td>Q17</td>
<td>121</td>
<td>69/57.02%</td>
<td>50/41.32%</td>
<td>0/0.00%</td>
<td>2/1.65%</td>
<td>0/0.00%</td>
</tr>
<tr>
<td>Q18</td>
<td>122</td>
<td>30/24.59%</td>
<td>49/40.16%</td>
<td>17/13.93%</td>
<td>18/14.75%</td>
<td>8/6.56%</td>
</tr>
<tr>
<td>Q19</td>
<td>121</td>
<td>11/9.09%</td>
<td>35/28.93%</td>
<td>45/37.19%</td>
<td>25/20.66%</td>
<td>5/4.13%</td>
</tr>
<tr>
<td>Q20</td>
<td>121</td>
<td>4/3.31%</td>
<td>46/38.02%</td>
<td>53/43.80%</td>
<td>14/11.57%</td>
<td>4/3.31%</td>
</tr>
<tr>
<td>Q21</td>
<td>120</td>
<td>9/7.50%</td>
<td>32/26.67%</td>
<td>55/45.83%</td>
<td>18/15.00%</td>
<td>6/5.00%</td>
</tr>
<tr>
<td>Q22</td>
<td>121</td>
<td>42/34.71%</td>
<td>49/40.50%</td>
<td>19/15.70%</td>
<td>8/6.61%</td>
<td>3/2.48%</td>
</tr>
</tbody>
</table>

When asked parents (89.7%) responded that they used online options (Q11) and 55.00% of parents responded that they used their smartphones to look up information about special education (Q15). Additionally, 90.17% of parents surveyed did use computers with the Internet at public locations (Q16); rather, they primarily used their own computers with Internet access to search and located special education resources (Q17). The majority (64.75%) of parents used social media (e.g., Facebook, blogs, other platforms) for parent conversations rather than face-to-face conversations when searching for information (e.g., procedures, intervention tips, general instructional recommendations) (Q18). Parents responses were slightly more positive (38.02%), however, in contrast, 37.19% were neutral with 24.79% responding negatively when asked about reflecting more on special education issues or topics after discussion with other parents through social media when compared to other ways of learning informally (Q19). Similar results were found, with (Q20) 43.89% of parents were neutral but with nearly the same percentage (43.33%)
of parents responding positively to changing their perspective about their child’s education program after discussing issues with other parents online and again (Q21) 45.83% of parents were neutral with 34.17% of parents responding positively about applying information after discussing issues online with other parents. Parents responded more frequently, 75.21% of the time, that they emailed their child’s teacher more frequently than they spoke face-to-face to discuss issues (Q22).

An additional parent comment provided information about their adult learning preferences stating:

I am a visual, rather than auditory learner. That is the sole reason that I do not gain as much from face-to-face sessions with people. I need to see things in writing. If I were to be face-to-face and have things in writing that would be ideal. However, I do like the time to reflect that emails give me, which is not something I would have in a face-to-face meeting.

Next, I will introduce the next set of variables with descriptive statistics and response percentages for the next group of questions.

**Other informal ways of learning.** A few questions probed other informal ways of learning including written materials, research articles, or books as these were mentioned frequently by parents as important resources for learning during parent interviews. One question explored parents’ attendance or interest in parent training as informal learning occurs along with more formal ways of learning (Schugurensky, 2000). Additionally, one question investigated whether schools were offering parent group meetings to support parents. Table 13 presents descriptive statistics which represents the participant group, as a whole, and how they answered
using the Likert scale (1) definitely agree, (2) agree, (3) neither agree or disagree, (4) disagree, (5) definitely disagree.

Table 13

Descriptive Statistics Q10, Q30-Q31.

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q10</td>
<td>1.87</td>
<td>0.082</td>
</tr>
<tr>
<td>Q30</td>
<td>2.77</td>
<td>1.35</td>
</tr>
<tr>
<td>Q31</td>
<td>2.70</td>
<td>1.35</td>
</tr>
</tbody>
</table>

Table 14 presents the findings for this set of questions relating to other ways parents learn informally.

Table 14

Other Informal Ways of Learning by Number/Percentage

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Definitely Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Q10</td>
<td>120</td>
<td>42/35.00%</td>
<td>59/49.17%</td>
<td>12/10.00%</td>
<td>7/5.83%</td>
<td>0/0.00%</td>
</tr>
<tr>
<td>Q30</td>
<td>121</td>
<td>25/20.66%</td>
<td>38/31.40%</td>
<td>12/9.92%</td>
<td>32/26.45%</td>
<td>14/11.57%</td>
</tr>
<tr>
<td>Q31</td>
<td>121</td>
<td>28/23.14%</td>
<td>36/29.75%</td>
<td>15/12.40%</td>
<td>28/23.14%</td>
<td>14/11.57%</td>
</tr>
</tbody>
</table>

Parents indicated a preference for the use of written materials (books, research articles, or written resources) over face-to-face/discussion, with 84.17% responses. To explore the percentage of parents who were attending more structured learning environments, 52.06% of parents definitely agreed or agreed that they often attend parent training in addition to using less structured ways of learning (leaning on own, parent discussion, or social media). Parents also responded slightly more positively (52.89%) when asked if they often attended special education group meetings outside of the school-related activities.
Next, I will share descriptive statistics and response percentages for the next group of questions.

**IEP discussion/special education process.** The next set of questions focused on the IEP meeting and how parents learned informally about the purpose and components of the IEP through face-to-face discussion. Parents responded that they brought information they had learned to the IEP meetings as a result of their efforts to learn the special education process. Table 15 presents the descriptive statistics which represents the participant group, as a whole, and how they answered using the Likert scale (1) definitely agree, (2) agree, (3) neither agree or disagree, (4) disagree, (5) definitely disagree.

Table 15

*Descriptive Statistics Q26-Q29*

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q26</td>
<td>3.44</td>
<td>1.25</td>
</tr>
<tr>
<td>Q27</td>
<td>2.96</td>
<td>1.38</td>
</tr>
<tr>
<td>Q28</td>
<td>1.80</td>
<td>0.80</td>
</tr>
<tr>
<td>Q29</td>
<td>3.98</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Table 16 presents findings on page 204, of the IEP discussions during the special education process by number and percentages of responses.
Parents responded negatively much of the time (53.34%) that they did not learn about the IEP process and/or their parental rights during the IEP meeting. (Q27) A smaller percentage (25.00%) of parents, however, agreed that they do learn about the purpose and components, with the remaining 21.67% of parents were neutral (Q26). As an IEP team member, 50.00% of parents felt their IEP suggestions were discussed, considered, and willingly integrated into the IEP. (Q27). Parents responded positively that they applied informational tips learned from other parents 85.12% of the time during IEP meetings and (Q28) 91.00% of parents indicated schools were not providing information as their child aged (Q29).

One respondent shared a thought on gaining expertise and contributing information at the IEP meeting stating:

I need to state that I am a professor of education/taught as a teacher for 20 plus years. I deal with my son’s school with much more knowledge about education/special education (specifically dyslexia) than they have. This is not trying to be boastful. The have more resources related to autism than learning disabilities. They are very weak in LD (learning disabilities) support. They listen to me in IEP meetings because they have so little to bring to the table. I also have a stronger background in assessment. I am sure my

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Definitely Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Q26</td>
<td>120</td>
<td>10/8.33%</td>
<td>20/16.67%</td>
<td>26/21.67%</td>
<td>35/29.17%</td>
<td>20/24.17%</td>
</tr>
<tr>
<td>Q27</td>
<td>120</td>
<td>17/14.17%</td>
<td>43/35.83%</td>
<td>11/9.17%</td>
<td>26/21.67%</td>
<td>23/19.17%</td>
</tr>
<tr>
<td>Q28</td>
<td>121</td>
<td>47/38.84%</td>
<td>56/42.28%</td>
<td>14/11.57%</td>
<td>3/2.48%</td>
<td>1/0.083%</td>
</tr>
<tr>
<td>Q29</td>
<td>121</td>
<td>3/2.48%</td>
<td>20/16.53%</td>
<td>7/5.79%</td>
<td>37/30.58%</td>
<td>54/44.63%</td>
</tr>
</tbody>
</table>

Table 16

IEP Discussion/Special Education Process by Number/Percentage
background might skew your survey, but I always participate in research projects out of solidarity.

Another comment relating to the IEP process and the team following regulatory requirements. They shared: It is difficult to advocate for your child and to learn everything you need to know to advocate effectively. Around here, parents always say “why does it have to be so hard?” The respondent continued with, “Schools need training on how regulations they are supposed to be following and on how to collaborate and problem solve with parents.”

**IEP discussion/special education team.** The next set of questions investigated parents’ implicit or incidental learning during the IEP meetings. These questions probed how well parents perceived their input, feedback, questions, and information were received as a contributing member of the IEP team. Table 17 below provides descriptive statistics which represents the participant group, as a whole, and how they answered using the Likert scale (1) definitely agree, (2) agree, (3) neither agree or disagree, (4) disagree, (5) definitely disagree.

Table 17

*Descriptive Statistics Q32-Q37*

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q32</td>
<td>2.17</td>
<td>0.79</td>
</tr>
<tr>
<td>Q33</td>
<td>2.23</td>
<td>1.03</td>
</tr>
<tr>
<td>Q34</td>
<td>2.11</td>
<td>1.07</td>
</tr>
<tr>
<td>Q35</td>
<td>1.82</td>
<td>0.89</td>
</tr>
<tr>
<td>Q36</td>
<td>1.60</td>
<td>0.62</td>
</tr>
<tr>
<td>Q37</td>
<td>1.86</td>
<td>0.79</td>
</tr>
</tbody>
</table>
Table 18 presents the findings of the IEP discussion and learning about the special education team by number and percentages of responses.

Table 18

*IEP Discussion/Special Education Team by Number/Percentage*

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Definitely Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q32</td>
<td>121</td>
<td>21/17.36%</td>
<td>65/53.72%</td>
<td>29/23.97%</td>
<td>5/4.13%</td>
<td>1/0.83%</td>
</tr>
<tr>
<td>Q33</td>
<td>121</td>
<td>28/23.14%</td>
<td>56/46.28%</td>
<td>24/19.83%</td>
<td>7/5.79%</td>
<td>6/4.96%</td>
</tr>
<tr>
<td>Q34</td>
<td>121</td>
<td>36/29.75%</td>
<td>56/46.28%</td>
<td>16/13.22%</td>
<td>6/54.96%</td>
<td>7/5.79%</td>
</tr>
<tr>
<td>Q35</td>
<td>120</td>
<td>48/40.00%</td>
<td>56/46.67%</td>
<td>9/7.50%</td>
<td>4/3.33%</td>
<td>3/2.50%</td>
</tr>
<tr>
<td>Q36</td>
<td>121</td>
<td>37/30.58%</td>
<td>68/56.20%</td>
<td>1/0.083%</td>
<td>1/0.83%</td>
<td>14/11.57%</td>
</tr>
<tr>
<td>Q37</td>
<td>120</td>
<td>40/33.33%</td>
<td>62/51.67%</td>
<td>15/12.50%</td>
<td>1/0.83%</td>
<td>2/1.67%</td>
</tr>
</tbody>
</table>

Three questions (Q32-Q34) asked parents if they reflected on, gained new perspectives from or about the IEP team, or applied information learned during the IEP meeting. Overall 71.08% of parents responded they hear about latest information during the meeting; they develop different perspectives about the IEP team’s abilities to serve their child. Nearly 70% of parents responded positively indicating strong agreement when they contribute added information about their child’s current education program; they develop different insights, perspectives, and viewpoints about the team’s openness to discussing their information (Q33). Additionally, most parents (76.00%) indicated that when they request services they have located, studied, or explored; they develop views about the IEP team’s willingness to implement requested services by how they respond during the IEP meeting (Q34). Overall, a high percentage (86.67%) of parents agreed that when they ask detailed questions about special education evaluations, assessments, or interventions, they learned more about the IEP team’s capabilities to address
their (the parent’s) concerns, from how the IEP team responded (Q35) and 86.78% of parents indicated that it was important to identify IEP next steps for the IEP on their own (Q36). Parents again responded with a high degree of positivity (85.00%) that when new sources of information (potential education evaluators, interventionists, or consultants) were offered by the parent to help their child’s IEP team deliver their child’s program, they (the parent) learn more (insights) about the IEP teams’ willingness to learn from others by how the IEP team responds.

A few comments offered that provided additional insights into IEP meetings and how parents learn from IEP team members included: “I find that many people running IEP meetings aren’t clearly trained in how to write IEP’s and parents do not know the questions to ask”. Another parent shared the affective element of the IEP discussion sharing:

I have found that with educators, sometimes the conversation can be very emotionally charged. I find it frustrating that I have to seek out information and make inquiries about what can be done to meet my son’s needs instead of being proactively offered the information by his educators or the special needs support specialists.

Next, I will share descriptive statistics and response percentages for the next group of questions.

**Building and fostering connections.** Parents, when asked, indicated that they had learned ways to use their experiences, knowledge, skills, and attitudes to repair or build relationships with their educational team. Table 19 presents descriptive statistics which represents the participant group, as a whole, and how they answered using the Likert scale (1) definitely agree, (2) agree, (3) neither agree or disagree, (4) disagree, (5) definitely disagree.
Table 19

Descriptive Statistics Q38-Q40

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q38</td>
<td>2.46</td>
<td>1.14</td>
</tr>
<tr>
<td>Q39</td>
<td>1.85</td>
<td>0.95</td>
</tr>
<tr>
<td>Q40</td>
<td>1.22</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Table 20 provides the findings for the constructs of building and fostering connections.

Table 20

Building and Fostering Connections by Number/Percentage

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Definitely Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q38</td>
<td>121</td>
<td>27/22.31%</td>
<td>41/33.88%</td>
<td>29/23.97%</td>
<td>18/14.88%</td>
<td>6/4.96%</td>
</tr>
<tr>
<td>Q39</td>
<td>119</td>
<td>49/41.18%</td>
<td>51/42.86%</td>
<td>10/8.40%</td>
<td>6/5.04%</td>
<td>3/2.52%</td>
</tr>
<tr>
<td>Q40</td>
<td>121</td>
<td>2/1.65%</td>
<td>1/0.83%</td>
<td>0/0.00%</td>
<td>98/80.99%</td>
<td>20/16.53%</td>
</tr>
</tbody>
</table>

Parent responded (56.19%) that they have created ways to work with their IEP team (e.g., data charts for illustrating additional needs, suggesting short term trial use of an intervention, identifying cost saving resources for the team) (Q38). They overwhelmingly responded positively (84.04%) of the time that they learned over the years to prioritize goals for their child’s educational program and hold other recommendations for later implementation. Additionally, a high percentage (97.52%) of parents agreed that they felt it is important to monitor their child’s IEP. One open ended comment stated regarding IEP involvement and building connections: “Parents need to stay involved and up to date on their child’s IEPs.” Another parent commented how they view the collaboration at the IEP meeting. “The IEP
process and ongoing conversation can be difficult. I view the IEP conversation and addressing the needs of my child as a business conversation, as his main advocate."

Next, I will share a description of the next set of questions followed by descriptive statistics and response percentages for the next group of questions.

Learning through sharing. The final set of questions centered on parents’ perceptions of learning as they share, collaborate, and advocate with others. Items were created to probe parents’ sharing lessons learned with other parents, parents serving as a source for information for other parents and educators, and parents’ integrating learning with prior knowledge to advocate for change for a larger population of parents/children and in different contexts. Table 21 presents the statistics for these items which represents the participant group, as a whole, and how they answered using the Likert scale (1) definitely agree, (2) agree, (3) neither agree or disagree, (4) disagree, (5) definitely disagree.

Table 21

<table>
<thead>
<tr>
<th>Q#</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q41</td>
<td>1.52</td>
<td>0.78</td>
</tr>
<tr>
<td>Q42</td>
<td>2.87</td>
<td>1.40</td>
</tr>
<tr>
<td>Q43</td>
<td>2.61</td>
<td>1.28</td>
</tr>
<tr>
<td>Q44</td>
<td>3.07</td>
<td>1.35</td>
</tr>
<tr>
<td>Q45</td>
<td>2.17</td>
<td>1.08</td>
</tr>
<tr>
<td>Q46</td>
<td>2.02</td>
<td>0.94</td>
</tr>
<tr>
<td>Q47</td>
<td>2.02</td>
<td>0.97</td>
</tr>
</tbody>
</table>
Table 22 below presents the survey responses for the items regarding parents sharing, collaborating, and advocating.

Table 22

Learning Through Sharing by Number/Percentage

<table>
<thead>
<tr>
<th>Q#</th>
<th>Count</th>
<th>Definitely Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Definitely Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q41</td>
<td>121</td>
<td>76/62.81%</td>
<td>31/25.62%</td>
<td>10/8.26%</td>
<td>4/3.31%</td>
<td>0/0.00%</td>
</tr>
<tr>
<td>Q42</td>
<td>120</td>
<td>29/24.17%</td>
<td>21/17.50%</td>
<td>25/20.83%</td>
<td>27/22.50%</td>
<td>18/15.00%</td>
</tr>
<tr>
<td>Q43</td>
<td>121</td>
<td>31/25.62%</td>
<td>29/23.97%</td>
<td>27/22.31%</td>
<td>24/19.83%</td>
<td>10/8.26%</td>
</tr>
<tr>
<td>Q44</td>
<td>121</td>
<td>24/19.83%</td>
<td>15/12.40%</td>
<td>31/25.62%</td>
<td>31/25.62%</td>
<td>20/16.53%</td>
</tr>
<tr>
<td>Q45</td>
<td>120</td>
<td>37/30.83%</td>
<td>44/36.67%</td>
<td>25/20.83%</td>
<td>9/7.50%</td>
<td>5/4.17%</td>
</tr>
<tr>
<td>Q46</td>
<td>120</td>
<td>39/32.50%</td>
<td>51/42.50%</td>
<td>18/15.00%</td>
<td>12/10.00%</td>
<td>0/0.00%</td>
</tr>
<tr>
<td>Q47</td>
<td>121</td>
<td>40/33.06%</td>
<td>54/44.63%</td>
<td>11/9.09%</td>
<td>16/13.22%</td>
<td>0/0.00%</td>
</tr>
</tbody>
</table>

Parents most frequently agreed (88.43%) that they share information with other parents (Q41). Moreover, more than 42% of parents had offered informational sessions for other parents (Q42). About 50% of parents felt they had become a leader and had guided through support resources, a larger number of parents (Q43). However, fewer, 32.23% indicated they had become a parent support at IEP meetings (Q44). When asked if parents were drawn to or interested in finding answers or addressing special education issues for a larger population of families (Q45), 67.50% of parents answered positively. To investigate parents’ thoughts on how they managed ongoing special education issues, most parents (75.00%) agreed that they addressed these in the same way they addressed other demands or issues, in their lives (Q46) and similarly, most parents agreed (78.00%) they solved ongoing special education issues the same way they do other challenges in their everyday lives.
One parent comment from the open-ended responses provided a personal perspective on their learning through sharing information with other parents:

Our children with special needs are in various programs (i.e., sports, recreational) and it is at these events that we speak with other parents and get to talking about special education. We give and receive recommendations, advice, and knowledge about other available programs.

Next, I will provide an overall discussion of descriptive statistics.

Summary of Descriptive Analysis

Among respondents, the majority were White females between the ages of 35 and 54. Most respondents held a four-year degree or some type of professional degree and reported household incomes in the $50,000-$100,000 range. Most of the participants identified their children as having a specific learning disability or autism.

From the survey items, overwhelmingly, most parents did not have a clear picture of what they should do when they realized a need to learn about special education. While many indicated that they relied on schools for information, many parents also believed that they did not receive enough information about steps to take to receive an evaluation for identification of services, nor what to do with evaluations results and planning for the IEP process. Moreover, parents responded more frequently than not that they experienced barriers (e.g., physical, language, cost) to accessing special education informational training or informational events.

When navigating the world of special education, a high percentage of parents routinely set aside time to learn on their own about their child’s disability, assessments, interventions, parental rights, and the special education process. Most parents indicated they developed structured plans for themselves to follow to identify opportunities for learning; and, it was
evident by the frequency of response that parents continued their self-direction to identify next steps for their child’s IEP. Slightly more than 50.00% of parents developed a way to work collaboratively with the IEP team; however, there were mixed results as to the utility of face-to-face discussion with other parents and teachers when compared with other learning opportunities.

Not surprisingly, a high percentage of parent used smartphones and personal computers to learn about special education issues and topics. Most parents who used social media to connect with other parents, however, indicated they were neutral regarding those online interactions as useful for reflection opportunities, changing their perspectives, or for application of their growing knowledge. Responses also revealed that parents used email to communicate with their child’s teacher more so than other ways of discussing issues, and a high percentage of parents preferred written materials over face-to-face communication with other parents. Slightly more than 50.00% of parents attended structured parent training, and most parents indicated training sessions for parents were not offered by their children’s schools. Slightly more than half of parents indicated they did not learn about parental rights or other special education processes from attending IEP meetings, but many felt successful in contributing suggestions, requesting information, or inquiring about topics they had located, studied, or explored on their own.

Despite their apparent lack of responses indicating they used face-to-face discussions with other parents, a high percentage indicated that they shared information with other parents, and many offered informational sessions or resources to other parents. A similar number of parents were interested in finding answers or addressing special education issues for a larger population of families. Lastly, when addressing ongoing special education issues, many parents approached everyday issues and demands in the same ways that they dealt with ongoing special
education issues. Next, in the next section, correlation analyses represent how these experiences were related to one another and to the parent demographics.

**Correlation Analyses**

The next section provides results of a correlation analysis of parents’ informal learning practices and their involvement in their children’s IEP development at their respective schools. Pearson’s correlation coefficient analysis determines linear relationships between variables. A positive correlation indicates that both variables follow the same pattern (e.g., as parents learn more, they participate more), while a negative correlation indicates that the variables follow opposite patterns (e.g., as parents learn more, they participate less). The Pearson correlation coefficient analysis helped identify the existence and strength of relationships between two of subscales: navigating special education, subscale 2, and sharing to learn, subscale 3, with the findings presented in Table 23 on page 214. As identified in a previous section, subscale 1, realizing a need to learn, did not demonstrate construct reliability at $\alpha>.070$ using Chronbach’s alpha ($\alpha=0.162$); therefore, the subscale was eliminated from the correlation analyses.
Table 23

*Correlations Between Subscales*

<table>
<thead>
<tr>
<th>Subscale 2</th>
<th>Subscale 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigating Special Education</td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.188</td>
</tr>
<tr>
<td>N</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>0.039*</td>
</tr>
<tr>
<td></td>
<td>121</td>
</tr>
<tr>
<td>Subscale 3</td>
<td></td>
</tr>
<tr>
<td>Sharing to Learn</td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.188</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.039*</td>
</tr>
<tr>
<td>N</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td>122</td>
</tr>
</tbody>
</table>

*Correlation is significant at the $p<0.05$ (2-tailed)

Subscale 2 and 3 were positively correlated, $r(121)=0.188$, $p<0.039$. This positive correlation indicates a significant relationship between the two variables, such that, as these parents learned to navigate the world of special education, they also shared more of what they learned with others.

**Demographic and Survey Item Analysis**

Correlation analyses completed also investigate possible relationships between the parents’ demographics of race/ethnicity, income, age, and education and their involvement in their children’s education. This was done using one-way between-subjects analysis of variance (ANOVA) tests. ANOVA is a statistical procedure that can determine whether there are statistically significant differences between the means of two or more independent groups. ANOVA uses the F-tests to statistically test the equality of means therefore the F statistic is a ratio (F-ratio) of two variances. The F-ratio assesses the overall fit of a regression model to a set
of observed data. If the means of the two or more independent groups is significant, the F value is
< 1.0 and the p value is <0.05. Due to the lack of socioeconomic and sociocultural diversity in
the survey sample, and while acknowledging the problematic categorization of different races
and ethnicities in one group, the race/ethnicity total group (N=119) was collapsed to include
African American (N=5), Asian (N=1), Hispanic/Latino (N=5) and Other (N=5) as one group and
White (N=101) as another group. This grouping was done to reach a sufficient population
representation for potentially meaningful analysis of the race/ethnicity relationships to the other
variables. These tests were conducted for each of the four demographic variables, race/ethnicity
(N=116), age (N=120), income (N=114), and education attainment (N=121) to investigate how
the variables impacted parent’s response to various survey questions.

The one-way between-subjects ANOVA tests analyzed the relationships, or the variance
between the means, of the demographics of race/ethnicity (collapsed), age, income, and
education attainment to subscales 2 and 3. There were no significant differences in means at p
<0.05. It should be noted that the samples (groupings) for this study had very little difference to
create comparisons from the sample tested. Therefore, caution should be used in any
interpretations of these findings due to the limited diversity of the sample analyzed.

Chapter Summary

Chapter Five presents the findings for the quantitative survey portion of this research
study. Parents are self-directed in their learning, they routinely set aside time to learn, and some
generate a plan or path to identify learning options. Parents were active in the use of the Internet,
using social media for parent conversations. However, most parents indicated a preference for
written materials. Many parents indicated that face-to-face conversations did not indicate that
parents realized discussion provided a way for most parents to reflect on and change perspective about special education issues that affected their child. In contrast, parents commented that parent face-to-face conversations did help them to apply new information to their child’s education program when they spoke with other parents and their child’s teacher.

Overall, schools do not readily assist parents in information assistance in the special education process regarding support materials or parent training as many parents indicated they attended parent meetings that were not school-related. Most parents did not indicate they learned about important special education processes during the IEP meeting however they did indicate that they learned incidentally and implicitly about IEP team member attitudes, abilities, and the openness to receive information and willingness to accept parent recommendations at the during the IEP meeting. Regarding online use, responses revealed a high percentage of parents using social media and online searching methods to locate information with mixed results as to whether discussions with other parents online provided a way to reflect on and change perspective or adjust their thinking about special education process.

A higher percentage of parents indicated they are interested in sharing information they have learned through their experiences with others, with a moderate percentage of parents leading others through more structured training opportunities. Overall, self-directed behavior continued, starting in the early learning process through sharing information with others. Next, Chapter Six will discuss the integration of the data from both qualitative and quantitative findings and the implications for practice and further research.
CHAPTER SIX

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

The purpose of this research study was to explore parents’ informal learning of special education and to investigate the relationship between parents’ informal learning and parent involvement. In line with the purpose of this study, two primary research questions guided this study:

1.) How do parents learn informally about the special education process?
2.) What is the relationship between parents’ informal learning and parent involvement?

Using a sequential exploratory mixed methods research design, explained in detail in Chapter Three, I began with the qualitative phase, which informed the development of a survey for use with a larger population in the quantitative phase (Creswell, 20015; Greene et al., 1989).

This chapter begins with an integration of the qualitative and quantitative findings (see Chapters Four and Five for details). Next, I utilize conceptual models and theoretical frameworks to help interpret the results. This study’s contribution to current research literature on parents’ learning about and involvement in special education for their children follows. The final sections will discuss the implications of the study for theory, research, and practice, and concluding remarks.

Integration of Qualitative and Quantitative Findings

In mixed methods, data collection methods are combined to expose complementary strengths and nonoverlapping weaknesses; therefore, a crucial stage of the study is to integrate (e.g., compare, contrast, infuse, link, modify one based on another) the two sets of inferences generated by each of the phases (Teddlie & Tashakkori, 2009). Before combining the data, however, a brief review of the study procedures will assist in understanding my interpretation of
the findings. The qualitative data consisted of in-depth interviews with ten parents of special education children. Following analysis of this data, a quantitative, online survey was developed and designed to explore the themes that emerged from the qualitative data. The surveys, distributed to parents of children with special needs via special education parent support groups and organizations in the Mid-Atlantic region, yielded 122 completed surveys. After the quantitative data analysis, integrated findings from both types of data were shared in a joint display.

The sequential exploratory mixed method design requires utilization of the themes from the qualitative data to build the quantitative instrument. This design simplifies the process of data integration, because the findings are typically organized around the same themes. The three main findings reflect the needs of the parents at different stages of the learning process:

1. Realizing a need to learn reveals the early processes parents go through when they learn their children have special education needs, including how parents questioned, reflected, and accepted the need to learn, but discovered an often-negative path to learning about the special education process.

2. Navigating special education illuminates the middle stage of adjusting to and learning about special education and encompassed how parents encountered a maze of information, yet, as self-directed learners, they gained knowledge, skills, and attitudes, incidentally and implicitly, and built and fostered connections with their children’s educational team, even when faced with challenges and barriers within the education system.

3. Sharing, collaborating, and advocacy to learn reflects the final stage, during which parents feel comfortable enough with their learning, and are learning through sharing
their knowledge, skills, and insights. As a result, they become sources of information for other parents, take leadership steps to provide information for others, and engage in advocacy to make change at different levels and in different special education contexts.

Integration also assisted me in fully addressing the research questions with support and verifiable information from two sources of data. Additionally, a joint display allowed for data to be brought together visually, potentially eliciting new insights beyond those gained from the separate qualitative or quantitative analysis (Gutterman, Fetters, & Creswell, 2015). Table 24 provides a thematic comparison of the qualitative, quantitative, and integrated findings as they relate to Research Question 1: How do parents learn informally about special education?

Table 24

<table>
<thead>
<tr>
<th>Joint Display of Integrated Findings for Research Question 1</th>
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<tbody>
<tr>
<td><strong>Qualitative Interview Findings</strong></td>
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<tr>
<td><strong>Realizing Need to Learn</strong></td>
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<tr>
<td>Self-examination</td>
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<td>Reflection on adjustments to be made</td>
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<tr>
<td>Accepting the need to learn</td>
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<td>Began to formulate a path to identify a way to learn from other parents, sources, or schools</td>
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<td><strong>Navigating Special Education</strong></td>
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<tr>
<td>Learning complex information through a nonlinear path</td>
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<td>Stumbled upon information inadvertently</td>
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Using online, face-to-face, or other sources of information to learn about special education

- 89.7% (N=122) online use
- 98% (N=121) personal computers
- 55% (N=122) smartphone use
- 64.7% (N=122) social media for parent conversations
- 38% (N=121) reflected on special education issues after discussion with other parents on social media
- 44% (N=121) neutral on changing perspectives on topic after discussion on social media
- 46% (N=120) neutral apply information after online discussion

Sharing, Collaborating, Advocacy to Learn

Parents’ sharing lessons learned with other parents
- 88.4% (N=120) share information with other parents
- 42% (N=120) offered informational sessions resources
- 50% (N=121) became leader and guided others
- 75% (N=120) addressed special education demands same way they address other issues/demands in everyday lives.
- 77.7% (121) solved problems in similar way as other challenges in their everyday lives

Serving as a source of information for other parents and educators

- Majority of parents used online resources for retrieval of information; utility of learning through social media inconclusive
- Parents used other ways of learning: strong preference for written materials; helpful resources often found by chance when seeking other information or using sources outside the school
- Quantitative findings corroborate and provide specificity to qualitative findings
- Parents, as they gained self-efficacy, shared information with other parents; some sharing in more structured ways, developing leadership roles, and integrating the knowledge and skills with prior knowledge to advocate for change for more parents

Table 25 provides a thematic comparison of the qualitative, quantitative, and integrated findings as they relate to Research Question 2: What is the relationship between parents’ informal learning and parent involvement?
Table 25

Joint Display of Integrated Findings for Research Question 2

<table>
<thead>
<tr>
<th>Qualitative Interview Findings</th>
<th>Quantitative Survey Findings</th>
<th>Integrated Findings</th>
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<tr>
<td><strong>Realizing Need to Learn</strong></td>
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<tr>
<td>Starting a path to learn about</td>
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<tr>
<td>special education</td>
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<tr>
<td>Number and type of staff involved</td>
<td>48.3% (N=120) relied primarily on their school to assist</td>
<td>Quantitative findings corroborate qualitative findings</td>
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<tr>
<td>Experienced frustration</td>
<td>24% (N=122) IEP team informed</td>
<td>Although parents realized need to learn and wanted to fortify themselves with information, schools were not reliable source and barriers to accessing information were reported</td>
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<td>Encountered negative interactions</td>
<td>74.1% (N=122) schools did not provide enough information</td>
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<tr>
<td>beginning at the early phase of working with special ed</td>
<td>87.7% (N=122) needed more information than what the school provided for evaluations</td>
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<td>57.3% (N=122) experienced barriers</td>
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<tr>
<td><strong>Navigating Special Education</strong></td>
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<tr>
<td>Learning about complexities of</td>
<td>49.2% (N=120) discussion with teachers helped them apply information to their child’s program</td>
<td>Quantitative findings corroborate and extend qualitative findings</td>
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<td>information (e.g., terminology,</td>
<td>75.2% (N=121) emailed teacher more frequently than speak face-to-face to discuss issues</td>
<td>Majority of parents used other resources to learn about special education than school resources</td>
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<td>process, and from issues that arise)</td>
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<tr>
<td>Using multiple resources and sources of information, did not indicate teacher was source</td>
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<td>Experiencing frustration with IEP</td>
<td>53.3% (N=122) disagree that they learn about the IEP process during IEP meeting</td>
<td>Parents were not learning about the overall IEP process which includes procedural rights</td>
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<td>team by how they responded during IEP</td>
<td>91% (N=121) schools did not provide information as the students aged</td>
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<td>meeting</td>
<td>71.08% (N=121) when they heard about new information, they developed different perspectives about IEP team’s abilities to serve child</td>
<td>Parents learned about the IEP team’s capabilities, openness, and willingness, to collaborate by how the IEP team responded during meetings</td>
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<td>70% (N=121) when contributed new information about child’s current education, IEP team’s response resulted in development of different insights, perspectives, viewpoints about team’s openness to discussing parent’s information</td>
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<td>76% (N=121) IEP team’s response resulted in development of views about team’s willingness to implement requested services</td>
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<td>86.7% (N=120) asked detailed questions about evaluations, assessments, or interventions, learned more about IEP team’s capabilities</td>
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<td>Building connections after reflection and adjustments</td>
<td>87% (N=121) it was important to identify next steps for the IEP on own 85% (N=120) when new sources of information were offered by the parent to help IEP team, learned more about IEP team’s willingness to learn from those sources</td>
<td>Parents identified ways to work more closely with teams after reflection and adjusting their approach, through ongoing self-directed learning and monitoring the IEP</td>
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| Sharing, Collaborating, Advocacy to Learn | 57.2% (N=120) developed and learned ways to work creatively (e.g., data charts, trials, cost saving resources) with the IEP team 84.0% (N=119) learned to prioritize goals for their child’s educational program and hold other recommendations for later 97.5% (N=121) felt it was important to monitor their child’s IEP 32% (N=121) role as advocate to support parents at IEP meetings 67% (N=121) had interest in helping larger population of parents with learning about special education | Quantitative data supports qualitative findings
Parents often share their knowledge and skills with other parents and are interested in advocacy |

**Findings in Light of the Conceptual and Theoretical Frameworks**

The following section discusses each of the three findings and how they can be interpreted using the theoretical and conceptual framework that guided this study: informal constructs and social cognitive learning theory. In order to understand the findings through these lenses, a brief review of the main components and concepts of informal learning begins the discussion, followed by a similar review of social cognitive learning theory.

Informal learning is ubiquitous and often transparent learning that takes place in everyday life in natural contexts (Illeris, 2004). Informal learning includes self-directed, incidental, and tacit or implicit learning, all dimensions of the level of intentionality and consciousness and the learner’s readiness and orientation for learning from experiences (Schugurensky, 2000). The initiation, or trigger, for learning comes from the environment or the context of the learner’s...
everyday life (Marsick & Watkins, 1990). Principally learner-centered, informal learning is often nonlinear and multidirectional, with the learner’s needs met wherever or whenever they arise, often through social interactions (Coletta, 1996). Because adult learners continue to modify their beliefs, values, and knowledge as they proceed through life (Brookfield, 1981; Cranton 1992), informal learning provides a way to examine parents’ self-directedness, intentionality, and awareness at the time of their learning experiences, whether in meetings, in discussions with other parents, during online research, or taking advantage of other parent education opportunities. However, informal learning alone cannot explain all the parental experiences with special education, so theoretical components were also drawn from social cognition theory to help explain cognitive, social, and behavioral aspects of parents’ learning.

A core construct of social cognition is self-efficacy, or the belief in oneself to exercise control over one’s life. By exercising control and reflecting on learning, one’s perspectives will change and influence the individual’s confidence (Bandura, 1997). An individual’s beliefs about self-efficacy are often embedded in a network of relationships (Bandura, 1997). For this study, as parents learned and made accomplishments, they increased their self-efficacy, leading them to repeat this behavior to produce those achievements again. Personal agency, or believing the self can produce the same control and outcomes, was used to examine how parents came to believe their knowledge, insights, and skills, learning informally, will produce results. Along with personal agency and self-efficacy, social cognition assumes that observation, modeling, and back-and-forth interactions with others are central to learning, as they encourage reflection, self-analysis, and problem-solving (Bandura, 1986; Candy, 1991).
Realizing A Need to Learn

Parents, having received news of their children requiring special education services, began their learning path with little or no knowledge. They realized they needed to identify what their children’s needs would be and, through intentionality, began to formulate a path they would take to be able to do that. Drawing from Marsick and Watkins’ (1990) early model of informal learning helped to explain the interpretation and problem-solving process parents described when hearing unexpected information, such as their child’s need for special education services. In the case of this study’s participants, parents sometimes reported an uneasy feeling that ultimately triggered a need to make meaning of the situation, identify next steps to find answers, and understand actions to take to learn more about their children’s needs.

Having realized a need to learn about special education, parents attempted to make sense of the situation by questioning and reflecting on their values, beliefs, attitudes, and assumptions, which was clearly expressed by George when he said, “I never imagined him (son) needing special education services. So that came as a shock.” His statement illustrates how the constructs of informal learning inform parents’ experiences with the sudden realization of their children’s needs, challenged their frame of reference about educational circumstances requiring parents to reflect, and adjust their thinking and acting through intentionality (Cseh, et al., 1999; Marsick, et al., 2006; Marsick & Watkins, 1990). Furthermore, informal learning constructs guided the understanding of these findings as parents began to consider alternative paths formulated through planful thought and proposal strategies to locate information even though they had very little information of where to begin.

Most parents started this learning process from a point of little or no knowledge about special education. From an informal learning perspective, as mentioned previously, their
reaction to this lack of knowledge was the catalyst for their self-directed learning behavior, and their learning was primarily learner centered (Watkins et al., 2018; Marsick & Watkins, 1990) however, social cognition concepts (Bandura, 1977, 1986, 1997, 2001) helped elucidate or explain other components of parents’ experiences, including the overwhelming sense of urgency and emotion in their encounter with the information maze of special education.

Social cognition learning theory assisted in gaining an understanding of different aspects of parents’ agency and personal learning, including the affective, actions, and cognitive dimensions of parents’ learning they used to accomplish tasks and goals that give meaning, direction, and satisfaction to their lives (Bandura, 1977, 2001). Parents began their learning journey through self-examination, questioning, reflection, and acceptance of their existing knowledge and skill gaps and what they needed to do to learn from others, including parents, parent groups, educators, experts in the field, and others. Parents also shared descriptions of thoughts to plan (foreshadow), and to act (intentionality), and how they self-regulated or monitored their responses and actions. Bandura’s (1977) social learning theory and later works of social foundations of thought (1986), self-control and action (1997) guided the understanding of these socio-emotional and cognitive aspects.

Social cognitive constructs provided explanations for parents’ feelings and emotions, expressed when parents described their responses (self-reactiveness) and how they would determine next steps based on new insights and learning (self-reflectiveness). Through self-examination and reflection parents began to question their own motivations and feelings. They identified new goals, actions, and assumptions that would need to be accepted and acted on for their child and their family. Parents, when encountering challenges and problems, responded to these uncertainties and frustrations with the schools, through forethought, planning, and action.
As parents began to set goals for themselves and formulated their learning paths, they continued to question themselves and reflect on prior knowledge, skills, and attitudes that would guide them in their decisions for their children. They often described how they planned self-generated outcomes, were in control of their actions, regulated their emotional state, and made decisions based on their moral compass, reasoning, and judgement about what would be the best plan of action for their child and family (Bandura, 2000; Marsick, 2005).

Schugurensky’s model (2000) named three types of informal learning; self-directed, implicit, and tacit and described them by intentionality and awareness at the time of learning. This model also helped to understand parents’ perceptions of conversations with educators and other school officials. Parents often described the exchanges and how they learned about the attitudes, beliefs, and values of educators. Barbara shared: “My education started because there was a lack of understanding by the school system.” As a construct, implicit learning provided a foundation to interpret parents’ perceptions of the parent-to-professional discussions and frustrations in delays, sometimes for months and years, in getting an evaluation or appropriate services for their child. These parent-professional discussions also influenced how they saw barriers created by the attitudes of school staff. Parents reported gradually becoming aware of the attitudes of professionals either at the time of these interactions, shortly after discussions, or later when sharing experiences with others, even as their child continued to fall farther behind in school. These attitudinal barriers shaped their thinking, and parents realized they needed to identify other ways of learning.

Enhancing the parents’ sometimes negative perceptions of their schools, they felt that the schools were not always forthcoming nor dependable in discussing basic or alternative sources of information early in the special education process. Parents also indicated that schools did not
provide adequate or timely resources (e.g., written materials, evaluation methods, research information, evidence-based practices) early on or throughout the special education process. This placed the responsibility on parents to locate foundational information in other ways. Parents needed to learn the basics of special education, as evidenced by comments by one parent, who shared: “learning about special education, just services…who [the] team players are…what the IEP is.” Therefore, parents primarily began their self-directed search outside of the school, indicating both attitudinal and informational barriers to helpful and timely information.

This early process of finding out sudden, life-altering news was summed up by one parent, Louise, as she reflected, “There is some kind of stage to get to acceptance and then you are empowered.” Compounding the learning process was that parents expressed they often felt a sense of urgency by the natural context of their lives (Illeris, 2004), which prompted adjustments in the ways they learned. This will be explained further in the next description of the findings in light of the theoretical and conceptual frameworks, specifically on how parents navigated the system of special education over several years.

**Navigating Special Education**

Parents reported more formal learning, as they engaged in more structured contexts, such as a course they took or informational trainings they attended. However, the second finding revealed that much of their learning about special education was completed in informal ways including self-directed behavior (Schugurensky, 2000), as parents navigated through a maze of information, such as new terminology, professional titles, diagnostic methods, and intervention tools, as mentioned previously. Just as they were conscious and intentional early in the learning process, they continued to be self-directed over time (Illeris, 2004; Marsick & Watkins, 1990).
Stumbling upon information and learning nonlinearly. Most parents became familiar with specialized information that was helpful for them and their child’s educational needs by chance, using an inductive process of reflections and action (Marsick & Volpe, 1999). This happenstance learning often occurred at times when parents did not intend to learn; but, rather, they realized or became conscious of the value of the knowledge they gained during chance encounters with information, which then reinforced the cyclical and ongoing accidental nature of their learning. Parents also reported a preference for written materials, such as books, research articles, and newsletters, and their use of technology and the Internet, although they appeared to use those tools in different ways and on different timelines.

Drawing from Schugurensky’s (2000) tri-part typology of informal learning, parents were self-directed in their planning, shared their intentions and level of awareness at the time, and described their contemplative strategies. Kristen illuminated this with her comment: “I had to get knowledge to fortify myself.” Moreover, informal learning conceptualizations of unintended learning helped to clarify how parents learned, or constructed knowledge. They became conscious or aware of the pertinence and importance of a situation or piece of information that might answer their questions, whether parents realized at that moment they encountered it or after the encounter. Haphazard recommendations or impromptu comments made by others turned out to be unintended learning opportunities, which helped parents formulate their next steps through investigating bits and pieces of information and terms or concepts they heard by chance. Incidental and implicit learning assumptions also guided understanding of how parents were not always learning in a highly-structured way, revealing the nonlinear fashion of constructed learning through happenstance (Marsick 2009). However, the accuracy of
information or the effectiveness of information learned when applied to their specific situation was not clear.

**Online learning.** Parents reported that they accessed the Internet and found samples of recommended educational procedures (e.g., evaluations, intervention methods, or instructional resources), accessed online websites, and shared these items with the IEP team. They set aside time to learn, indicating self-directed, planned learning, and that they were evolving in their learning by connecting and layering knowledge and skills and becoming more sophisticated learners (Hager & Halliday, 2009). They obtained helpful resources and located sources of new information, which enabled them to be cognizant of the next steps they needed to investigate. In reconceptualizing and updating the original 1990 Marsick and Watkins model of informal learning, Watkins et al. (2018) discussed the pronounced influence of technology on today’s informal learning, particularly as it relates to learning on our own. For this study, online resources that parents mentioned were captured and documented as parents shared how resources found were used to inform educators and others. This was helpful to understand the broader use of online resources; however, the critical thinking required as to how parents evaluated, weighed or determined the level of effectiveness, and whether or not the resources directly benefitted their child’s educational program are inconclusive and require further study.

**Learning from IEP meetings.** An additional context for learning was the IEP meeting. Parents revealed that they learned about the teams’ attitudes and willingness to assist in their understanding but as evidenced by both the qualitative and survey findings, parents did not report they were learning about the actual IEP process. The IEP process is an overall progression starting with information about their child, current levels of strengths and needs, additional assessments and interpretation, and goal setting to monitor progress. Parents had
repeatedly indicated they learned about the IEP, and cited resources and tools they learned about to address these IEP process components. These findings upon initial analysis appeared contradictory, however, informal learning constructs helped to clarify.

Informal learning constructs of context and critical incidents that require problem-solving (Cseh, Watkins, & Marsick, 1999; Cseh et al., 1999) provided insights into how parents viewed their learning of the IEP process differently than how they viewed their learning of the IEP teams’ attitudes and willingness to assist them in the IEP meeting. Critical incidents can trigger misperceptions or attitudes erecting barriers to available educational solutions or resources. Assumptions made during those critical incidents of others’ beliefs, values, and skills may not be realized at the time (Marsick & Watkins, 1990; Schugurensky, 2000). Social cognition and informal learning constructs added to the understanding of why parents may not have been aware at the moment and were not reflecting on the incident at that time. Moreover, critical comments or perceived attitudes of one or more of the team members shaped parents’ perceptions and responses during the meeting and parents reported many negative experiences about the IEP process itself, potentially impacting the perception that they were not learning about the IEP process and their parental rights. Therefore, understanding the role context plays and the dimensions of implicit learning may explain these thought to be contradictory findings, and helps explain why parents may not have reported they were learning about the actual IEP process.

**Building connections.** As mentioned, parents shared a loss of trust during the special education process. They reported they had to fight through to continue to provide supports for their child. When considering contextual factors and unintended outcomes, parents reported how after reflection, they had made mistakes or misinterpretations and were willing to build and foster connections with team members (Cseh, et al., 1999). The informal learning process is
cyclical, and includes the individual interpreting the trigger, finding alternative solutions, applying new or revised strategies, and implementing the chosen strategy, with an evaluation of the consequences. This evaluation resulted in the process of ‘lessons learned’ and highlights the reframing of context as a summative response to the informal learning endeavor (Marsick et al., 2008). It was important to note that parents took a step back and reassessed, solved problems and developed new strategies to try at IEP meetings. This study’s findings also revealed that some parents shifted their thinking and their beliefs over time and began to assist other parents in their learning of the IEP process.

Assisting in interpretation of parents building and fostering connections, was Bandura’s (2001) conceptualization of self-reactiveness, or how an individual reacts and manages their behavior, considering cognitive and environmental conditions. This is the first step toward doing something to affect that behavior. Actions give rise to self-reactive influence through performance comparisons with an individual’s own personal goals and standards, which are rooted in a value system and a sense of personal identity. Parents’ goals for learning more about special education to assist their child, provides the impetus or motivation to invest in their learning, giving these activities meaning and purpose. Parents reported achieving their goals and learning specific information. They shared the information with the IEP team, which suggests evidence of self-reactiveness to define their actions and monitor their behavior.

In addition to self-reactiveness, parents also reported perceived self-efficacy, or the human capacity to believe in oneself (Bandura, 2001). Parents believed if they did not view information discussed for their child in the same way as the IEP team members, they used new ways of expressing themselves and their thoughts. Some parents used their new capabilities to show teachers methods or charts to monitor goals and discussed assessment accommodations they
had developed. Parents expressed belief in themselves by reflecting on their learning perspectives and making different, proactive choices. Therefore, Bandura’s (1997) conception of self-reactiveness and self-reflection provided a lens to inform this study on how parents built confidence and fostered relationships with their IEP team. These constructs explained how parents made choices, shared new information, learned through the Internet or written resources, and changed their approaches when working with the IEP team in order to clarify the complex special education process. Parents, encouraged by how they accomplished these acts and what they were able to learn from them, repeated this behavior to produce those achievements again.

As noted, the back-and-forth interactions with educators or other parents, or reciprocal dialogue, further illustrated the usefulness of social cognition constructs (Bandura, 2001). Dialogue was another way for parents to gain additional information through reflection, self-analysis, and problem-solving (Bandura, 1986; Candy 1991). Parents also expressed greater self-efficacy when they felt their knowledge, when expressed during the IEP meeting, was acknowledged as useful for the IEP team. They felt they had contributed information that was important for their child’s educational program. Parents reported that their increased knowledge made them feel more powerful and, when exercising their new skills, they were successful in getting the services they needed for their child or understood better why they the services they requested were not provided. Thus, in navigating the world of special education and its processes, it was through observation and social modeling (Bandura, 2001) that parents utilized self-reflection and reciprocal dialogue to learn and become more empowered. After successful interactions, they changed their own perspective, learned new skills, and adjusted, which helped them identify ways to work more closely with the IEP team (Marsick & Volpe, 1999; Schugurensky, 2000).
Sharing, Collaborating, Advocacy to Learn

The third major finding from this study revealed that parents are likely to share information and collaborate with others, not only at the IEP with team members but during other face-to-face interactions and with other parents, which adds to the interpretations of findings considering conceptual frameworks.

**Developing a leadership role.** The ongoing cyclical informal and incidental learning identified through informal learning assumptions revealed that parents with greater self-efficacy were empowered to teach others. This finding answered both research questions in that parents used informal ways to learn through self-directed and intentional learning, but also through situations with more application to broader contexts and group work (Marsick, 2009; Wenger, 1998). Parents developed leadership positions, organized their own parent groups and mentored other parents. They were highly reflective as they described sharing resources with educators. Their learning, as they described it, was spiraling in nature, in a never-ending process that also extended to the learning of others (Marsick et al., 2008). Parents also shared they were enriched in their own learning and became more sophisticated by extending their learning to others.

As mentioned, parents viewed other parents as sources of information and had an interest in sharing lessons learned. Parents were also providing peer mentorships to one another, enjoying the way they felt more understood by others who had been through the same thing. Some supported other parents in important meetings and explained the complexities of the special education process. Some created local parent discussion and support groups and/or began new jobs, working in organizations that taught other parents or supported them. As a result of their new knowledge and abilities, they had greater self-efficacy, motivation, and confidence to continue their roles as sources of information and advocates. Parents took the
initiative, as self-directed learners, to modify their behavior, beliefs, values, and knowledge, felt
a sense of accomplishment, and had the confidence to act for change (Brookfield, 1986; Cranton,
1992) in different contexts.

**Paths of advocacy.** Parents were exercising control over their lives (Bandura, 2001),
learning more intricate ways of thinking and reflecting, changing perspectives, and speaking up
with confidence (Bandura, 1997). Parents believed they could act to solve problems on a
broader stage, and were more inclined to do so as they felt more self-efficacious and committed
to that action. These informal learning constructs provided additional conceptualizations and
constructs that helped to explain parents’ integration or extension of their social learning as they
share information in many different contexts, whether it is one-to-one with legislators, through
peer mentorships, at the state advisory meetings, or at national events they attend (Watkins et al.,
2018).

Findings from this study regarding how parents, through self-directedness, are using
technology and the social aspects of the use of social media were not fully explained; however,
parents also reported it as a prominent tool or method to search and locate information they
deemed necessary and useful, but also a method of communication with others. Parents are
learning every day about special education; they are self-directed learners, learning at their
choice and preference for method; and, they are primarily using written resources, online
resources, and discussion with other parents to learn. They are learning by choice, but also
incidentally in a nonlinear fashion and implicitly through dialogue and socialization with others.
The next section will situate the major findings of this study within current research on parent
involvement, parent education and training, and online empirical works reviewed in Chapter
Two.
Implications for Parent Involvement and Training

Findings from this study both support and inform current literature, specifically, the current literature on parent involvement, informal learning, and online learning. The next sections will identify these contributions beginning with the parent involvement literature.

Parent Involvement

Burke (2012) underscored the obligatory role of parents as key members of the IEP process in the entitlement of special education for their children. Current literature defining dimensions of parent involvement, includes indicators of: a) communication, b) commitment, c) equality, d) skills, e) respect, and f) trust, as evidence-based best practices to foster greater parent-professional partnerships (Blue-Banning et al., 2015). Parents’ in this study demonstrated those practices as they were active in their child’s education program, shared information with IEP team members, and communicated new information and resources with the team; but this did not happen from the beginning of their special education journey, nor did it happen for all parents. They demonstrated openness to exchange information and appeared to be completely devoted and committed to their children and their educational program.

However, parents did not always feel heard by the team, or feel a sense of assurance about the devotion of educators to their child’s educational program. At times, parents did not feel respected and lost trust in the team. These feelings appeared to carry over from the IEP team to other relationships, as parents indicated that the interactions with the teacher and school influenced their involvement, as did their feelings of self-efficacy (de La Luz Reynoso & Tidwell, 1996; Hernandez, et al., 2008; Lai & Vadeboncoeur, 2013; Nachshen & Minnes, 2005; Neeley-Barnes, et al., 2010; Nowell & Salem, 2007; Stoner & Angell, 2006; Zionts, et al., 2003).
Specifically, parents responded that the quality of teacher interactions was important, and that, by learning informally and sharing information they gained, parents became contributing members to their child’s education program. Parents from this study also revealed that they had moved past what they called the “fight,” and recognized that parent-professional relationship-building assisted in greater collaborative efforts among team members. Therefore, findings from this study confirm the best practices in building relationships and working collaboratively and suggest that not using those practices as a guide may be detrimental to the partnerships between parents and schools.

The findings also reveal how parents were able to reassess their approach to relationship building with the IEP team, which has not been discussed in the literature. Parents shared specifics on how they adjusted their thinking based on what they learned from misperceptions or misunderstandings and, then, changed how they interacted with the team to make IEP meetings more productive. Examples parents provided included: learning not to be belligerent while remaining determined to get what their child needed; contributing to the IEP meetings with information and resources they found; being honest about what they wanted; showing respect for team members; and communicating in positive ways. All these actions formed the relationships, mentioned above, that led to parents perceiving that they were considered equal members of the IEP teams.

On the other hand, though, more subtle relationship dynamics appeared from the findings, including parents’ frustrations with what they perceived as negative attitudes, they learned implicitly from the IEP team. Parents suggested that they were able to measure the team’s willingness, openness, and capabilities to help their child, as well as the team’s ability to work with other professionals to help their child. This information adds a valuable dimension to
the current literature and recognizes the significance of recognizing all interactions as learning opportunities for all partners.

There was little mention in the parent involvement literature of how informal learning provided a way for parents to access new information, reflect on what they learned and still need to know, and problem-solve, as they make necessary adjustments to their daily communications or actions as they engage with schools (Applequist, 2009; Lalvani, 2012; Nowell & Salem, 2007). Most parents started with little or no knowledge of special education, and most parents were self-directed, setting aside time to learn; however, their learning path was not always linear, and parents identified confusing terminology and issues that required other directions of investigation. These factors can inform future considerations when working with parents who are new to special education. Current literature also indicates that there was a need for further exploration of parent involvement and training to address their need to obtain and build knowledge and skills, ideally, resulting in greater parent self-efficacy (Lalvani, 2012; Neeley-Barnes et al., 2010; Nachshen & Minnes, 2005; Nowell, & Salem, 2007; Rodriguez, et al., 2014; Zionts, et al. 2003).

**Parent Education and Training**

Sparse empirical literature exists on the effectiveness of formal parent education and training efforts (Hoard & Shepard, 2005; Kohut & Andrews, 2004); moreover, current studies suggest that formal training sessions can create physical, transportation, and financial access barriers for parents (Burke, 2013; Whitbread et al., 2007). Not surprisingly, then, most parents from this study reported that learning on their own and through informal methods gave them greater knowledge and skills about special education when compared with more formal training options. Further, this study also provided some insights into ways self-efficacious parents share
resources with other parents and may create parent supports, informal learning communities, and peer mentoring opportunities. The findings indicated that parents, as they gained self-efficacy, sometimes shared what they learned in more structured ways, developing leadership roles and integrating their knowledge and skills to advocate for change for more parents. Through additional study of these informal learning methods at the school level, the school may more effectively serve parents who experience socioeconomic, socio-cultural, linguistic, or other barriers to more formal parent education programs.

These findings illuminate potential ways for schools and parent programs and organizations to leverage motivated parents’ often unrecognized and overlooked, skills, as parents have much to offer in sharing information gained via informal learning options. Two studies on parent advocacy training programs focused on building awareness of content related to special education and how to become an advocate (Burke, 2013; Whitbread, et al., 2007), finding that discussion could be a useful way for parents to learn and that parents are already helping other parents in establishing peer mentorships. Likewise, in my study, parents confirm that they are already sharing, communicating, leveling the knowledge “field,” and advocating for their children and for other parents. It is possible that the content of training programs should shift focus from formally-presented content to discussions and the day-to-day opportunities for learning to build positive and productive parent-professional relationships. By expanding on this research effort, informal learning could be studied across many different contexts and groups to inform parents and adult educators.

**Online Learning**

There are contributions to online learning research from this study regarding a broader use of learning online. The majority of parents from my study indicated that they were using
computers and smartphones, and that they were accessing the Internet to search for online information. Some of the parents shared specific websites and a few indicated they used social media platforms. This is in line with most general findings in the literature (The American Community Survey, 2016) and in line with current empirical work on parents’ use in that parents show more interest in accessing online information to check sources and to access health and family related information for their families benefit (Allen & Rainie, 2002). However, my study did not look specifically at the aspects of parents’ evaluative skills, their satisfaction or critical thinking skills that dictated how they explicitly chose information to look for or make final selections of resources or how the information was determined to benefit their child’s program. This study contributes to the current literature that parents used highly specialization sites (Allen & Rannie, 2002) and that they decided to search based on overhearing about a resource often hapanstance. They looked for research on specific special education assessments, interventions and overall education locations that provided services and returned to these sites frequently as their “go to” sites (Heo & Lee, 2012). Additionally, they mentioned going online to update themselves with current topics (Heo & Lee, 2012) being discussed by other parents. Therefore this study does contribute to the general use of technology online or web-based applications, social network sites to to share information, gain knowledge or retain and nuture a social relationship (Heo & Lee, 2012).

Implications and Recommendations for Theory, Research, and Practice

Findings from this study have implications for theory, research, and practice in adult education, which will be explored in this section, including recommendations for future research and practice. Although this study explored the learning experiences of a specific group of adults, parents with children in special education, it has important implications for informal learning
constructs and frameworks, and for social cognitive learning theory in adult education. Informal learning constructs will be addressed first, followed by social cognitive learning theory.

**Implications for Informal Learning Conceptual Frameworks**

This study demonstrates the high degree of usefulness for interpreting and understanding how adults learn through their everyday encounters with problems that need to be solved, with new tasks that confront them, with information that must be found, and with different social groupings. While this is not a new way to explore and describe informal learning, this study illustrates the ways in which the theory can and should be applied to reveal the increasing number of places from which people draw information. Findings from this study, when viewed through the lens of informal learning, indicate that parents were self-directed, and learning incidentally and implicitly, which, along with dimensions of consciousness and intentionality, are all described by Schugurensky's tri-part typology (2000). Parents reported learning in private and in non-organized contexts of everyday life (Illeris, 2004), reflecting the informal and incidental cyclical learning assumptions from workplace learning literature (Cseh et al., 1999; Marsick et al., 2008; Marsick & Watkins, 1990; Watkins et al., 2018; Watkins & Marsick, 1997).

My process of analyzing and interpreting the findings using informal learning constructs, demonstrates how much depth is added to the ways in which we can describe adults’ iterative processes of problem-solving, reflection, and action, and how they learn from mistakes, get and use ideas from others, and give and receive feedback. This increase in the quality of information gained from studying these participants’ learning through the lens of informal learning sets the stage for more research into the ways to capture and increase adults’ ability to learn informally.

A more recent re-conceptualization of the original Marsick and Watkins’ 1990 model of workplace learning (Watkins et al., 2018) suggests that informal learning constructs should
recognize and call attention to the social nature of group learning and consider how technology provides a means for individuals to extend their learning, and the implications for the necessary critical thinking and evaluation of information skills. Applied to my study and its participants, this revised framework provides a more detailed way to understand the social aspects of the IEP team and other interactions that may affect learning and communication for adults. This study also has implications that confirm the necessity of adding technology, evaluative, and critical thinking components to how informal learning is viewed.

**Implications for Social Cognitive Learning Theory**

My analysis through the lens of social cognition theoretical assumptions (Bandura, 2001) provided a high degree of usefulness to capture and analyze how adults as agents of their learning make sense of social situations. As in this study, social cognition had a primary application to the individual and their thoughts and perceptions (Fiske & Taylor, 1991). The application of four key social cognition constructs of adult capabilities of intentionality, forethought, self-reactiveness, and self-reflectiveness revealed the number of ways in which social cognition theory can and should be applied viewing adults as agents who can self-examine, be intentional, make things happen through belief systems, and monitor their actions and reflect on what they are doing to make adjustments. These social cognitive constructs also had great utility in explaining many perceptive and affective aspects of the adult learning experience, and my study adds examples to those current applications of social cognitive theory, in regards to the depth of how adults as agents of their own actions react to social experiences and question their thoughts, or what steps they took to make things happen and command control to realize intentions and goals in different social environments.
The application of social cognition frameworks also helped to understand how adults perceive their building of skills and self-efficacy (Bandura, 1997), self-examining the adequacy of their thoughts and actions. Adults determine the success of their actions and whether they should repeat those actions as they continually evaluate their motivations, values and the meaning of their current life pursuits. This study adds to social cognitive theory by how different groups of individuals use self-reflectiveness to address conflicts, and to act on informed choices for their child and their family. Moreover, this study adds to social cognition underpinnings revealed by individuals in their cyclical learning and depth of understanding the number of ways in which an individual plan to produce different outcomes for themselves over time. This study revealed forethought and planning but also multiple adjustments as they learned in a non-linear way. The appearance of nonlinear learning adds to how social cognitive theory is interpreted as this study provided examples of self-reactiveness, planfulness and highly motivate individuals, yet learning in nonsequential ways and despite experience barriers. Moreover, this study contributes to social cognitive constructs of self-reflectiveness in that individual as self-motivated and self-directed continued with plans to move forward in a positive way despite a history of less positive experiences learning compensatory or alternative ways of learning. This study adds to how social cognitive constructs may be viewed by demonstrating achievement based on anticipation of positive future outcomes, empowerment and goal attainment.

**Implications for Practice**

The findings of this research study inform several adult education practices, which, while specific to the study’s population, can potentially be applied to the wider field of adult education. Most specifically, the findings have implications for neighborhood schools in their approach to
information dissemination, and considerations for systemic change in parent involvement practices to foster a welcoming culture for all parents. The findings from this study also inform parent education and training design and delivery from schools or school related sources. With these implications, the next few sections will outline recommendations for future practice that are informed by the findings of this study.

**Effective dissemination of information.** This study revealed a pervasive issue of schools not providing information to parents in a timely fashion, even though information dissemination to parents is a basic requirement for schools at the local level. From the inception of special education as an entitlement program, parents have advocated for greater awareness and involvement (Hehir, 2001, Turnbull & Turnbull, 2015), informed policies, programs, and procedures, and worked on federally-funded informational project grants designed to disseminate information nationally to any parent who should need assistance. Despite clear evidence of parent involvement in special education, my study suggests that information is not reaching the wider parent population through their local school, as many parents reported obtaining most information from outside the school setting. It is critical for administrators and educators to recognize this problem and the barriers that prevent information delivery. Additionally, professionals must educate themselves, so they are aware of these resources and can adequately, quickly, and accurately inform parents of what is available to them.

Moreover, as noted above, parents readily use the Internet to gather information about special education. Most, if not all, public-school districts have websites, typically with a list of special education services. Schools practice should make their districts’ special education informational site known to parents. There, in addition to written materials as required by each district, schools could provide special education information and should publicize the location of
that information to all parents, educators, professionals, and staff in the district. The centralized location also ensures that information is disseminated equally and with consistency. However, schools must also be aware that parents in this study reported a preference for written materials, so allowing parents to choose the method of delivery they prefer for information might be helpful.

**Parent contributions and partnerships.** Parents expressed an interest in helping other parents to learn about special education, which can be leveraged for maximum benefit if schools establish a culture of collaboration with parents and local community resources. Schools might provide space for an informational area or hub and identify key educators, resources, space for face-to-face meetings, discussions with other parents, or virtual training and meeting spaces. Parents’ knowledge is often overlooked and underutilized in schools, and they should not have to attend large conferences or trainings to develop their understanding of what special education is and what the procedures are in the schools. Schools should reassess their practices and look for ways to work with parents. If they can facilitate collaborative parent-professional partnerships (Blue-Banning, et al., 2015) and improve their communication efforts, and reevaluate partnership aspects for example of flexibility, validation of parents and demonstrating a willingness to learn from outside sources. They will have the opportunity to begin to learn immediately and alongside educators about the special education process. These steps may increase the likelihood of connecting with families, while also reducing existing informational and attitudinal barriers.

Parents, through their self-directed learning, increased their self-efficacy, began to share with other parents, and developed leadership roles in the community. As such, schools should recognize the potential for parents to be teachers of other adults; after all, parents are the first teachers of their children. Parents and educators could present short sessions together for other
parents and parent groups around special education foundational concepts, such as accessing the
general education curriculum, identifying targeted goals that align with grade-level content, and
reporting progress.

**Teacher and professional preparation programs.** Exposing pre-service students to the
parent perspective, including how parents learn informally and how they learn about the
capabilities of their child’s IEP team, is a starting point. Coursework focusing on the importance
of collaborative efforts between IEP team members and families would show the teacher
candidates that the child can only benefit from this partnership. Exploration of how to
incorporate the parent voice, knowledge, and skills, as well as how they learn informally would
provide a unique perspective to those who will be working hand-and-hand with parents at the
school level.

**Adult education.** In addition to the implications described above for parents, schools,
teachers, and professional preparation programs, adult education practice can also benefit from
this study. This study provides application to the wider field of adult education specifically adult
development in that through informal learning practices. Adults demonstrated the essential
knowledge acquisition that was necessary to meet their needs and adults reported development of
capabilities and skills that lead to their subsequent critical thinking and empowerment to act on
these capabilities to further their development. Adults, having no previous knowledge of a
multifaceted entitlement service realized the need to learn, activated informal learning practices
and reported a comfort level to share these resources with others and for some, this learning led
to roles of leadership.

This study also has implications related to adult education regarding access to
information and the critical thinking that is necessary to use that information. Adults reported
they were motivated to participate in learning but reported informational access barriers through more traditional ways of receiving that information upon request. This study illustrated the pervasive abilities of adults to access information online through searches using the Internet. In the context of this study, parents through self-initiation found ways through informal learning practices to access information that was timely and relevant. As access barriers remain today (American Community Survey, 2016) some advancements (i.e., smartphones) are providing greater digital technology options for adults yet the impact of potential discrepancies in skills needed to determine efficacious use (although not conclusive in this study) will play a factor in adult education practices moving forward.

Moreover, this study has implications for adult education and adult learning as it illuminates the inescapable problem-solving adults are faced with. It provides additional information as to how they are solving issues through face-to-face discussions, incidental ways of recognizing information as it presents arbitrarily, recognizing the value of information, and acting on the information for more productive outcomes. Additionally, adults are learning through implicit ways to address issues during meetings demonstrating self-reflection, flexibility of thought, and new perspectives to address problems to find solutions. These informal ways of learning, either face-to-face or virtually, are foundational to relationship-building and effective collaboration addressed as part of adult education practices.

Overall, implications from this study for adult education is that adult education efforts, even if supported nationally with funding, do not always reach the very adults they were meant to impact when offered in more structured or formal ways (Coombs, 1989) providing further support that informal learning ways of gaining knowledge and skills through every day methods
should receive the emphasis in adult education for the utility, evidenced by this study, for a broader adult population of lifelong learners.

**Implications for Future Research**

This study and its findings add to the existing body of research on adults’ informal learning. Adult education literature reviews indicated a need for more research that looked at parents’ informal learning, and, specifically, at self-directed, implicit, and incidental ways adults learn (Schugurensky, 2000; Watkins, et al., 2018). Informal learning is additive, in that some types of informal learning can be observed naturally, even in more structured trainings. More recent adult education and training research however (Glang, et al., 2007; Hoard & Shepard, 2005; Kohut & Andrews, 2004) has investigated broader parent education efforts or parents’ learning during more structured or formal parent intervention endeavors with little mention of informal learning aspects of self-directed, incidental or implicit learning. It is recommended that additional adult education research seek to investigate how parents are learning through informal ways and to study how informal ways of learning may provide greater value to more structured ways of learning.

Implications for future adult education research also include more explanatory research into how adults navigate and learn from the Internet (Walker, 2012) and for more study of how adults are learning informally through the use of social media platforms (Heo & Lee, 2012). This study demonstrated the self-directed, non-linear, and haphazard nature of learning through online use and accessing social media. While on the surface, this latter setting might appear to offer opportunities to build knowledge and have discussions, exactly how learning happens online however more targeted analysis to determine how and why parents navigate to these sites, utilize the information, and how they evaluate to judge trustworthiness or determine satisfaction
with the information is needed (Heo & Lee, 2012; Rothbaum, et al., 2008). Furthermore, additional study is warranted to investigate socioeconomic factors that impact access as well as skill barriers (Rothbaum, et al., 2008) to determine how parents may benefit from more sophisticated searches and skillful evaluation of resources. Therefore, further study is recommended to determine the utility and effectiveness of learning in these online settings for adults who use these types resources and web-based sources of information.

Additional implications for adult education research centers on the use of the methodological approach of mixed methods, specifically a sequential exploratory design. Using this design, with a pragmatist foundation, I was able to explore a phenomenon of parents’ informal learning by constructing a reality from the parents’ viewpoint using an inductive approach in an effort to better understand the meaning of or how parents make sense of their informal learning. An emphasis on completing qualitative research first allowed me to discover the contexts and processes parents used and allowed me to explore unanticipated relationships or influences of their learning that may have impacted their involvement in their child’s education (Maxwell, 2013). The sequential exploratory approach also allowed for corroboration of the qualitative findings to build on the results with a larger parent population from well-grounded qualitative data. Having a more complete understanding of the overall phenomenon, the findings from this study encourages the use of this type of methodology for future research endeavors for those with similar methodological and pragmatic interests. Due to lack of diversity of the survey sample obtained for the quantitative phase of this study caution must be applied to any interpretation or generalizability of the findings.

It is also important to adult education research to examine further the impact and effect of informal learning for the parent population studied in this research endeavor. Other types of
research, such as phenomenological research, could be beneficial and provide additional insights for parents who are experiencing a sudden need to learn about information for their child’s benefit. For example, Reio and Fornes (2011), parents themselves, wrote of the recent diagnosis of their child, and discussed their reaction and adaptation to their child’s diagnosis, and revealed their self-directed and informal learning experiences.

Regarding implications for special education research, there is a need for greater understanding of parents’ informal ways of learning, as they readily share information with other parents, mentor, assist, and continue to build their knowledge and skills by engaging in leadership opportunities and advocacy roles. Additional research is, likewise, warranted on implicit learning through face-to-face discussions with IEP team members, which might provide insights and suggestions for administrators, educators, as well as parents, as they work toward collaborative efforts to benefit their child (Blue-Banning et al., 2004). Parents identified ways to work more closely with teams after reflection and adjustments to their behavior during interactions, but more research is needed to more fully understand the mechanisms that facilitate and maintain this process. Information gained from these types of research endeavors would benefit schools, administrators, parents, and other adult educators who provide training and technical assistance to improve the special education process.

As parents have been driving the national special education policy development since its inception (Hehir, 2008; Turnbull & Turnbull, 2015), more research that focuses on parents’ informal learning as captured in this study, particularly the stages of learning illuminated, could advance how research concerning how parents are learning in productive informal learning ways (e.g., face-to-face and online) could add to current research to build and foster connections of collaborative learning between parents and professionals.
Limitations

As all research does, this study had limitations that may have influenced the findings and interpretation of them. First, the qualitative sample (N=10) yielded limited representation by parents of different demographics of race/ethnicity, gender, ages, and education; thus, the sample may not represent a diverse range of viewpoints or perspectives. Parents may have also had difficulty recognizing and identifying their informal learning practices as learning, as they may have viewed their learning through the lens of a more structured, formal methods of learning (Livingstone, 2007). Probability or random sampling for survey recruitment was done from one geographic region, limiting the number of regional parent organizations selected. Despite a relatively large parent sample size for the survey (N=122), a diverse sample across the demographics of income, race/ethnicity, education, age, and gender was not obtained and did not represent the special education parent population in the U.S. (Teddlie & Yu, 2007).

Related to the use of exploratory sequential mixed method design, salient themes are chosen for further investigation based on research questions. It is possible that salient themes may have been given greater emphasis during the creation of the survey and integration of the two types of data (Tashakkori & Teddlie, 1998). Finally, in any study it is important to acknowledge the possibility of researcher bias. Adherence to strategies of trustworthiness were followed across all aspects of this research project. however, no research is without bias.

Concluding Remarks

This study’s conceptualization originated from an ongoing nagging feeling that there is a great deal of work that must still be done after forty plus years of effort, to ensure adults are learning and children are benefitting. I had no difficulty identifying a topic for research, as I have had a strong desire to look deeply at two issues, that despite my career as a speech and
language pathologist, adult educator, and educational administrator, have triggered considerable reflection through the years: why do so many parents report they are not able to receive the information they need to understand their child’s educational program? and what is missing as a service profession to meet, facilitate, or enforce the education and training needs of parents as members of the IEP team? So now I had my chance to take a deeper look at this phenomenon.

As scholars have stressed, I was the primary instrument of data collection and analysis (Guba & Lincoln, 1981) and therefore, there were obvious points of connection and strengths I was able to leverage (e.g., comfortableness with parents, talking the “terminology,” knowing many different contexts that were discussed). However, this study also deeply tested my investigation abilities (e.g., Am I missing key points? What is the data telling me? How do I convey these details in a formal way?). From data collection to analysis, this study stretched my thinking, changed my perspectives, and challenged me to truly listen and seek to better understand how parents view their lives’ and their learning. A truly humbling experience.

As reality and the calendar dictated, and as with every research project, there were unexpected interruptions and this project was no exception. However, I was routinely and consistently pulled back into this topic and reminded of the research questions posed and thankful for my continued passion for this project. Additionally, in usual fashion, I overestimated my physical abilities, and the fact that I selected a research methodology that all of the texts warned was lengthy (Creswell, 2015, Tashakkori & Teddlie, 2003), I was characteristically reminded that I have an opportunity: to identify enlightening information, uncover emerging findings, and pour over key information that may help others. Just as important, during interviews—four months of this journey—in my “listener” role, I entered dialogue with parents that was a distinct honor and pleasure, as they shared the details of their
lives and the lives of their children. I have had a profound opportunity to capture what contexts and processes, methods and techniques parents used to help their child benefit in school and in life. A role that I truly valued and respected.

It is my intent (and hope) that in addition to implications mentioned previously for theory, practice, and research that for those who review this body of work may consider a different perspective or viewpoint on how to capitalize on everyday learning to empower themselves and others.
Title: Exploring Parents’ Informal Learning of Special Education: A Mixed Method Approach

Principal Investigator: Lynn A. Dell, IRB Study # 00007282

Hello,

My name is Lynn Dell. I am a doctoral student in the Adult Education program at Pennsylvania State University Harrisburg. I am conducting research for my dissertation titled “Exploring Parents’ Informal Learning of Special Education: A Mixed Method Approach”. The purpose of my study is to understand the perspectives of parents of children receiving special education services, specifically how parents learn about special education in their everyday lives and what relationship informal learning has with parent involvement.

I am looking for parents to interview who: 1) are aged 25 years or older and have educational rights, and responsibilities for their child who is currently receiving special education services; and 2) has attended individualized educational program meetings for a minimum of three school years, and for whom consider themselves an active member of their child’s educational team; and 3) has contributed to parent education efforts, have been identified as a parent resource for other parents, or are part of a parent organization.

If you are interested in participating in this study, and meet the three criteria listed above, I look forward to discussing the possibility of interviewing you. Please email me at lad197@psu.edu or give me a call at 717-649-6912 (mobile).

Thank you for your time and consideration.

Lynn Dell
APPENDIX B

INTERVIEW GUIDE

As you know, this study is designed to explore your perceptions of how you learn about special education in your everyday life. It is also about identifying what impact, if any, your everyday learning (about special education), has on your involvement in your child’s educational (specifically special education) program.

1) Tell me a little bit about your child? What is unique and wonderful about your child? His/her strengths and interests?

2) When you learned that <name of child> was experiencing difficulties in school, what were some of your thoughts at that time? Can you give me some examples?

3) What did you do or what actions did you take? Can you give me some examples?

4) How did you learn about ways to help <name of child>? Can you give me some examples?

5) What were some of the ways you began to learn more about special education as it relates to your child’s strengths and needs? Can you give me some examples?

   a. What about parent support services or discussion groups that you could access? Can you describe?

   b. Were there informational documents? Can you name some examples?

   c. Online resources? Can you give some examples of how you used online resources?

   d. Was there training offered at the school or other support agencies/parent groups etc.? Can you tell me about your experiences?
6) If you would please, tell me about your current parent involvement with your child’s educational teachers/team? Do you consider yourself actively involved with your school’s educational programs, activities, and attend meetings when necessary? Can you give me some examples of some of your interactions with the school?

7) How has accessing parent resources and learning about special education impacted your parent involvement with the educational team or school program over time (e.g., Last 1, 2 or 3 years)? Can you give me some examples?

8) Describe if you would find ways you might continue to or have continued to learn about special education information (that relates to your child’s education) that you felt could help <name of child>? Can you give specific examples? (online, people, TV, library, school, educators, parents?)
APPENDIX C

NVIVO 12 THEMATIVE ORGANIZATION

The table below is an example of the themes and subthemes, called nodes, from NVivo 12. The themes are accompanied by the number of sources that contain information on the theme, and the number of times each theme was referred to by each source. For example, the theme of sharing/collaborating was mentioned by eight different sources a total of 50 different times. Below that larger theme of sharing/collaborating, there are two subthemes that give additional information about the general theme of sharing/collaborating.

Table 26

Themes, Sources, and References from NVivo 12

<table>
<thead>
<tr>
<th>Name</th>
<th>File</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing Collaborating</td>
<td>8</td>
<td>50</td>
</tr>
<tr>
<td>Establishing path to involve leadership</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Mission Continues</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Navigating the system</td>
<td>10</td>
<td>135</td>
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<tr>
<td>Loss of trust fighting back</td>
<td>6</td>
<td>39</td>
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<tr>
<td>Adjust to foster relationship</td>
<td>5</td>
<td>22</td>
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<tr>
<td>Finding voice</td>
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<td>53</td>
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<tr>
<td>Provide resource</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>With larger system</td>
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<td>3</td>
</tr>
<tr>
<td>With school staff</td>
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<td>8</td>
</tr>
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<tr>
<td>Access</td>
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<td>3</td>
</tr>
<tr>
<td>Get information</td>
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<td>1</td>
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<tr>
<td>Reading out to</td>
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</tr>
<tr>
<td>Sharing info</td>
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<td>1</td>
</tr>
<tr>
<td>Structured course</td>
<td>3</td>
<td>6</td>
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<tr>
<td>Realizing Need</td>
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<td>Developing their path</td>
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<td>Use of own resources</td>
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<td>23</td>
</tr>
<tr>
<td>Interacting with others</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Initial awareness</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>Parent as learner</td>
<td>10</td>
<td>38</td>
</tr>
</tbody>
</table>
APPENDIX D

SURVEY QUESTIONS

Q1 When I first noticed my child was struggling in school, it was clear to me what I should do next.

Q2 When I first noticed my child was struggling in school, I relied primarily on my child’s school to inform me about what my child's difficulties might be.

Q3 When my child started in elementary school, having already received special education from early intervention, I relied primarily on my child’s Individualized Education Program (IEP) team to inform me about the school aged special education process.

Q4 The information my school provided (e.g., through verbal instructions, resource materials, specific special education information) helped me to learn about how to ask for an evaluation to determine my child's education difficulties.

Q5 To learn more about what the special education process would be following an evaluation, I felt I needed additional information than what the school provided.

Q6 I usually experience one or more barriers (e.g., language translation barriers, physical accessibility, structural barriers, time barriers, travel barriers, cost barriers) to parent trainings special education conferences, or parent events.

Q7 I routinely set aside time to learn, on my own, about special education information (e.g. my child's disability, assessments, interventions my parental rights, special education process, other information).

Q8 I developed a structured plan by myself to follow in order to identify opportunities for learning more about special education (e.g., my child's disability, assessments, interventions, my parental rights, special education process).

Q9 When I want to learn more about special education (e.g., my child's disability, assessments, interventions, my parental rights special education process), I primarily look for other parents to meet with me face to face to talk about the special education questions I have.

Q10 When I want to learn about special education (e.g., my child's disability, assessments, interventions, my parental rights, special education process), I primarily use books, research articles, or written resource materials rather than meet with other parents face to face.

Q11 When I want to learn more about special education (e.g., my child's disability, assessments, interventions my parental rights, special education process), I use the Internet, special education resource websites, parent organizations, online groups social media rather than talk to other parents face to face.

Q12 I notice that when I discuss a special education issue with another parent face to face, I often think longer about, reflect more on, understand differently about, the information discussed
Q13 I notice when I discuss a special education issue with another parent face to face, I am more likely to make adjustments to my thinking, understand from a different viewpoint, change my perspective about the issue, than when I learn information in other ways (e.g., information gathered from written sources resources, Internet resources, social media, research articles).

Q14 I notice when I discuss special education issues with another parent face to face, I am better able to apply the information in a more meaningful way to my child's special education program than when I use other ways to learn about information (e.g., written resources, Internet resources, social media, research articles).

Q15 If I'm looking online for special education information, I might need or have heard about, I use my smartphone most of the time.

Q16 If I'm looking online for special education information, I might need or have heard about, I use the Internet through public access locations like the computers at public libraries.

Q17 If I'm looking online for special education information, I might need or have heard about from others, I use my own computer and Internet access.

Q18 I use social media for parent conversations (e.g., Facebook, blogs, or other social media platforms), rather than face to face conversations, to find out information about special education procedures, intervention tips, general instructional recommendations I might need to know about.

Q19 Discussing a special education issue online with other parents for different social media, I find I think about, reflect on, or understand more about the issue discussed, than using other ways to learn about the issue (e.g., written resources, face to face conversations with other parents, educators).

Q20 After discussing a special education issue online with other parents using different social media, I notice I make adjustments in my own thinking, change my perspective or think differently about my child's education program than when I use other ways to learn more information (e.g., written materials, research information, face to face conversations with other parents).

Q21 After discussing a special education issue online with other parents using different social media, I notice I am better able to apply the information in a more meaningful way to my child's education program, than when I use other ways to learn information (e.g., written materials, research information, face to face conversations with other parents).

Q22 I email my child's teacher (s) more frequently about my child's education program than I speak to the teacher (s) face to face.

Q23 I notice that when I discuss face to face, a particular issue with my child special education teacher, I often reflect more on the information discussed than when I use other ways to learn about the particular issue (e.g., emails, social media, face to face discussions with other parents).
Q24 I notice that when I discuss face to face a special education issue with my child's teacher(s), I often make adjustments in my own thinking, change my perspective, or create a different viewpoint about my child's education program, than when I use other ways to learn about the particular issue (e.g., emails, written resources, social media, face to face discussions with other parents).

Q25 I notice that when I discuss face to face special education issue with my child's teacher(s), I am better able to apply the information in a more meaningful way to my child's education program than when I use other ways to learn about the issue (e.g., emails, written resources, social media, face to face discussions with other parents).

Q26 Each time I attend an educational meeting about my child's IEP, I learn more about the overall special education process which includes my parental rights.

Q27 As a member of the IEP team, my suggestions about my child's program are regularly discussed, considered willingly, integrated into the IEP document.

Q28 After hearing about informational tips from parents, I often think about how I might apply the information to my child's educational situation when communicating with the IEP team.

Q29 The school offers informational sessions that explain the overall special education process as my child's education needs change (e.g., inclusive practices, assistive technology updates, social emotional supports, behavioral supports, secondary transition to post school options).

Q30 I often attend parent training about special education in addition to using less structured ways (e.g., learning on my own, parent to parent discussions, Internet resources, social media).

Q31 I often attend specific special education related parent groups, organizations, meetings not directly connected with my child’s school.

Q32 When I hear about new information from educators that may be relate to my child’s special education program (e.g., overhearing comments during my child’s IEP), I develop different insights, perspectives, viewpoints about the abilities of my child's team.

Q33 When I contribute new information about my child's current education practices (e.g., while talking with my child’s teachers during the IEP), I develop different insights, perspectives, viewpoints about the team’s openness to discussing my information, by how the team responds.

Q34 When I request services at the IEP that I have located, studied, or explored myself, I develop different insights, perspectives, or viewpoints about the IEP team’s willingness to implement the services by how they respond.

Q35 When I ask detailed questions about special education evaluations, assessments, interventions (e.g., during the IEP meeting, talking with educators), I learn more about the IEP team's capabilities to address my concerns, from how they respond.

Q36 I often find it necessary to be diligent in identifying IEP intervention next steps by myself.
Q37 When I provide information about potential education evaluators, interventionists, consultants, to help my child's education team deliver my child's program, I learn more about the IEP team's willingness to learn from others by how the IEP team responds.

Q38 Over the school years I have developed creative ways to work with my IEP team for more specific needs (e.g., data charts for illustrating additional needs, suggesting short-term trial use of an intervention, identifying cost saving resources for the team, other ways).

Q39 Over the school years, I have learned how to prioritize what I feel is most important for the team to work on for my child's benefit while keeping other priorities for later consideration.

Q40 Over the school years, I feel that I need to monitor my child's IEP progress.

Q41 Over the school years, I have learned that I often share special education information frequently with other parents who have had similar experiences as I have had.

Q42 Over the school years, I have offered informational sessions about special education supports, services, resources for other parents who may be new to special education.

Q43 Over the school years, I have become a leader, guiding other parents during parent informational programs, organizations, groups offering a variety of special education support resources to a larger number of parents.

Q44 Over this school years, I have become a parent support providing assistance to parents at IEP meetings.

Q45 I notice that I am often drawn to finding answers to special education issues that are related to the larger population of children receiving special education.

Q46 I notice that my ability to manage ongoing special education issues, demands, requirements is much like how I manage my daily responsibilities in my everyday life.

Q47 I notice that my ability to problem solve challenging special education issues is similar to how I problem solve other challenging issues in my everyday life.

Q48 About you: Please indicate your gender.

Q49 About you: What is your total household income?

Q50 About you: What is your ethnicity/race?

Q51 About you: What is your age?

Q52 About you: What is your highest grade or level of school education?

Q53 About your child: Please indicate the primary category of your child special education eligibility.

Q54 About your child: Please indicate the primary type of special education support your child receives.
Q55 About your child: Please indicate the grade level of your child currently.

Q56 OPTIONAL: Please feel free to provide any additional comments you feel would be helpful to support your response on this survey.
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