

EXPLORING THE EXPERIENCES OF LEARNING COACHES
IN A CYBER CHARTER SCHOOL: A QUALITATIVE CASE STUDY

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAII AT MĀNOA IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

EDUCATION

DECEMBER 2012

By

Lisa Hasler Waters

Dissertation Committee:

Michael P. Menchaca, Chairperson

Michael K. Barbour

James A. Dator

Ellen S. Hoffman

Peter Leong

Keywords: Cyber Charter Schools, Online Charters, Virtual Charters, Blended Learning,
Learning Coaches, Parental Involvement

DEDICATION

This study is dedicated to Ted, Bayan and Mia. They are my wonders.

ACKNOWLEDGEMENTS

What a ride this has been indeed. From the first days back to school enrolled in the University of Hawaii's new Educational Technology Ph.D. program to the experience of teaching my own children – this journey to delve deeper into the world of education has been affecting in the most positive of ways. Of course, it has only been possible because of the support and encouragement of my family, friends and colleagues.

Thank you,

Family: To my husband, Ted, I cannot imagine how I could have done this without him. He is my *querencia*. He is my inspiration. He is my adventure. He is my mountain. His dedication to honesty, to excellence, to professionalism and to helping others, have inspired me every day. I thank him for helping me to “Keep calm and carry on,” and for being there for me no matter how many thousands of miles we have traversed.

To my children, Bayan and Mia, for their curiosity, their love and their free spirits. Their inquisitiveness has kept me on my toes, causing me to put into concrete terms what I have been studying and why. And most importantly, I thank them for reminding me to play!

To my mom for always being there for me and for being willing to travel thousands of miles to help me with the kids so that I could continue my own professional endeavors. And, to her for her own dedication to life long learning, which has inspired me all along. To my dad, even though he is resting in peace, I still feel him and his powerful life lessons to keep it simple and to keep it loving.

To my Aunt Ce, and Uncle Chuck, for their life long and true support of my endeavors from my earliest days. And to my Aunt Ce for always being interested in what I was doing and encouraging me with her kind words.

To all my family, especially – David, Christine, Lisa, Peggy, Jenny, Katie, Susie, Carlos, Dave, both Pauls, my nieces and nephews Alexis, Ellie, Mila, Carly, Aubrey, Thomas, Megan, Brendan, James, Allie, Erin, and JP – for being part of this ride with me and helping me to enjoy life along the way.

Committee Members: To Dr. Mike Menchaca, Chair, Par Excellence, I thank him for keeping me grounded, for elucidating without preaching and for sharing his expertise on proper English grammar. Also for the subtle laughs he managed to sneak in while challenging me to rise to the intellectual pursuit required by this degree. To Dr. Ellen Hoffman, for her undying commitment to study of educational technology, which has prevailed throughout every class she has taught and every counseling session she has so devotedly opened to her students. Also for her commitment to quality and the pursuit of

deeper thinking. To Dr. Jim Dator for being the intellectually challenging seraph over my shoulder. Even though I was thousands of miles away, the lessons I learned from him – to think beyond the surface, beyond this reality, beyond just one future – served as constant reminders that there must be more. To this day, I cannot rest simply reading an article for Dator’s seraph is there calling on me to question everything. I thank him for that because it has been a fun ride! To Dr. Michael Barbour, for setting the research standards bar high and challenging me to rethink what is in black and white. And for his willingness and commitment to support a fledging researcher even during his busiest of times. To Dr. Peter Leong, a trusted colleague from the early days, for his sincere support of my endeavors. And for his never-failing positive views which have inspired me to press on and to step up to the challenge.

Friends: To Dr. Pamela Boswell, the most dedicated, driven, hard working person I know. I am inspired by her dedication to her family and friends who she puts first while managing to achieve all that she has set her sights upon. And for her undying support of my own challenges – through all the miles and time zones she is there. To Yvonne Almeida for her loving friendship and shared interest in so many things, especially the pursuit of understanding the field of education. And for the years of shared love, tears and laughter – she too is always there. To Dr. Wallace Psomas-Napier, for getting “there” first and for showering me with support and dedication to excellence in writing.

ABSTRACT

The parents and guardians of students enrolled in cyber charter schools are often relied upon to support the education of their children. Yet, little is known about them and concern exists over their effectiveness as educational facilitators.

The purpose of this exploratory case study was to discover the beliefs and behaviors of learning coaches as they supported their children enrolled in a cyber charter school. Five practicing learning coaches, who were the parents and guardians of cyber charter students, took part in this qualitative case study.

As a group, learning coaches believed they and not their children's teachers were ultimately responsible for instructing their children. Results indicated that to support their children, the learning coaches engaged in the four mechanisms of behavior as described by the Hoover-Dempsey and Sandler Model of Parental Involvement (Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins & Closson, 2005a). These behaviors included encouraging, reinforcing, modeling and instructing. However, learning coaches also engaged in two additional behaviors not described by the model: adapting and leveraging. Adapting was described as a behavior in which learning coaches adjusted instructional strategies, learning environments, daily schedules and even belief-systems to accommodate their children's learning needs. Leveraging resources was defined as the behavior in which learning coaches would access support and materials from a variety of sources to meet their children's learning needs. Often, this included resources from the Internet.

Ultimately, the study revealed that learning coaches created learner-centric environments. In such environments, technology was absolutely instrumental in helping learning coaches perform their roles and enabling them to provide flexible learning. Yet, these coaches faced significant challenges including: shortage of time, complexity of the role and lack of immediate access to teachers.

Overall, the study recommended that cyber charter schools: (a) investigate the needs of learning coaches and their students, (b) improve systems to enable learning coaches to engage in more effective teaching and learning, (c) provide differentiated training and services to meet the unique needs of learning coaches, and (d) study the roles of teachers and learning coaches to gain a better understanding of how to appropriate their responsibilities to maximize learning for students in cyber charters.

TABLE OF CONTENTS

DEDICATION.....	II
ACKNOWLEDGEMENTS.....	III
ABSTRACT.....	V
LIST OF TABLES	XII
LIST OF FIGURES.....	XIII
CHAPTER 1: INTRODUCTION.....	1
Introduction.....	1
Purpose of the Study.....	2
Background.....	2
Cyber Charter Schools.....	3
Parental Involvement in Education.....	8
Parental Support of Students in Cyber Schooling.....	10
Significance of the Study.....	11
Problem Statement	12
Research Questions	13
Context of the Study.....	13
Methodological Overview	14
Organization of the Study.....	17
Definitions	18
CHAPTER 2: REVIEW OF THE LITERATURE	23
Cyber charter schools	24

Evolution of Cyber Charters	24
Current Status of Cyber Charters	29
Operations of Cyber Charters	31
Components of Cyber Charters.....	36
Emerging Concerns	44
Parental Involvement in Education	58
HDS Model of Parental Involvement.....	66
Parental Involvement in Home Schooling.....	77
Parental Support of Students in Cyber Schooling.....	86
Problem Statement	107
Summary.....	108
 CHAPTER 3: METHODOLOGY	 110
Research Questions	111
Methodological Approach	112
Qualitative Study.....	113
Goals.....	115
Subjectivity Statement.....	116
Case Study Research	117
Conceptual Framework	121
Data Collection	129
Interviews.....	131
Focus Groups	133
Diary Logs	134

Secondary Data Sources	136
Survey	136
Participants and Setting	137
Participants.....	138
Setting.....	138
Data Analysis	140
Procedures for Analysis.....	141
Procedures for Quasi-Statistics Analysis.....	144
Consideration of Data Gathered from the Virtual Environment.....	145
Data Management	146
Limitations.....	146
Validity	148
Reliability	149
Ethics	150
Informed Consent.....	151
Summary.....	152
CHAPTER 4: RESULTS.....	154
Participants.....	155
Setting.....	158
Three Important Themes	160
Learner Centric	161
Awareness.....	161
Child's Needs.....	178

Resources	189
Teachers	189
Technology	193
Self.....	200
Curriculum	202
Training.....	205
Family.....	208
Others.....	210
Real Life	212
Reinforcing	212
Validating.....	215
Modeling.....	216
Summary.....	218
CHAPTER 5: CONCLUSIONS	221
Discussion.....	224
Research Question One: Support	227
Encouraging	232
Reinforcing	233
Modeling.....	235
Instructing.....	236
Two Additional Behaviors: Adapting and Leveraging.....	239
Quality	245
Research Question Two: Roles.....	247

Research Question Three: Technology	251
Research Question Four: Challenges	255
Revised Framework.....	257
Conclusion	260
Beyond the Model	261
Challenges Faced by Learning Coaches	263
System Improvements	264
Implications	267
Summary.....	268
Recommendations	269
APPENDIX A: SEMI-STRUCTURED INTERVIEW GUIDE.....	273
APPENDIX B: FOCUS GROUP QUESTIONS.	277
APPENDIX C: DIARY LOG REQUESTS.....	279
APPENDIX D:SECONDARY DATA, RESOURCES FOR COACHING.....	281
APPENDIX E: .SURVEY INSTRUMENT	290
APPENDIX F: IRB INFORMED CONSENT.	297
APPENDIX G: CURRICULUM SUPPORT MATERIALS.....	301
REFERENCES.....	303

LIST OF TABLES

<i>Table</i>	<i>Page</i>
1. Cyber charter school structure.....	33
2. What we know about parent roles in cyber charters.....	104
3. Data collection.....	130
4. Comparing participant instructional practices.....	177
5. Table of technology usage.....	194
6. Categories, patterns and dimensionalized behaviors.....	231

LIST OF FIGURES

<i>Figure</i>	<i>Page</i>
1. Conceptual framework.....	17
2. Number of state-led virtual school programs 2001-2011	27
3. Growth and evolution of cyber charter schools in the U.S.	31
4. HDS Model of Parental Involvement	69
5. Graph representing roles of learning coaches	128
6. Learning coaches' perceptions of their roles.....	180
7. Revised conceptual framework	258

CHAPTER 1: INTRODUCTION

Introduction

Cyber charter schools are a relatively new form of schooling that combine online learning with traditional and home schooling practices. These K-12 schools are publicly funded and are governed by charter school laws. While they often employ certified public school teachers to support students, they also rely on the parents/guardians of the students to provide educational support for their own children. However, this description oversimplifies the operations of these schools and the controversies that surround them, including how they make use of parents/guardians as educational facilitators.

Parental involvement in their children's education has long been thought of as a positive influence over student academic outcomes. Significant past research has shown that parental involvement in their children's traditional school education has led to positive academic outcomes (Baumrind, 1971; Dornbusch, Ritter, Leiderman, Roberts, & Faraleigh, 1987; Eccles & Harold, 1993; Epstein, 1986, 1995; Jeynes, 2010; Lareau, 2011; Lareau & Horvat, 1999; Sui-Chu & Willms, 1996; Zellman & Waterman, 1998). Recently, the same has been found when parents of students enrolled in supplementary online learning involve themselves in their children's educational endeavors (Black, 2009; Liu, Black, Algina, Cavanaugh, & Dawson, 2010). However, very little research has been done concerning parental involvement for students who attend cyber charter schools. The scant studies that have been conducted generally have found that parents and guardians of students enrolled in these schools play a central role in the education of their children (Ahn, 2011; McCluskey, 2002; Schaffhauser, 2012).

Furthermore, due in part to the relative newness of these schools there has been little research collected examining the effectiveness cyber charter schools have on student academic achievement (Barth, Hull, & St. Andrie, 2012; Glass & Welner, 2011). Yet some are hopeful that this next generation of distance education for K-12 holds promise (iNACOL, 2011).

Purpose of the Study

In these cyber schools, where traditional schooling is blended with virtual and home schooling practices, parents and guardians tend to play a central role in supporting their children's academic endeavors. They are thought of as educational facilitators and are often referred to as learning coaches.

The purpose of this exploratory case study was to discover the beliefs and behaviors of learning coaches as they supported their children enrolled in cyber charter school. The objectives of this research project were to better understand (a) the breadth, depth, and manner of educational support learning coaches provided their children who were enrolled in a cyber charter school; and, (b) how learning coaches themselves received support for their endeavors. Specifically, this study focused on a group of learning coaches whose children were enrolled in a cyber charter school located in Hawai'i.

Background

Three important topics concerning parent/guardian support of students enrolled in K-12 cyber schools informed this study: cyber charter schools, parental involvement in children's education, and parental support of K-12 students in cyber schooling.

Cyber Charter Schools

Cyber charters are a cross between home schooling and charter schooling, in which technology plays a central role in the delivery and management of learning. They represent the next generation of K-12 distance learning. These schools evolved from the long history of distance education and charter schooling in the U.S.

Distance education is a term used to refer to schooling in which teachers and students are physically separated (Schlosser & Simonson, 2005). In the U.S., distance education began in print and early forms were referred to as correspondence courses (Clark, 2003). Between the 1930s and 1990s, this form of education paralleled many of the technologies emerging during this time – from media and communications technologies, to the Internet revolution (Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004; Clark, 2003; Darrow, 2010; Molenda, 2007).

By the 1990s, personal computers became more accessible and the Internet reached beyond the walls of universities. K-12 schools began to advantage of this new medium for delivering education to younger learners (Clark, 2003; Darrow, 2010; Kozma, et al., 2000). Around the same time the concept of “charter” schools was developed. These schools were considered as experimental alternatives to public schooling. They were to operate within state traditional school guidelines, but they were given some flexibility in the way they managed and financed their operations (Center for Education Reform, 2011; Darrow, 2010; EducationWeek, 2011).

During the mid to late 90s, cyber charters schools began to emerge (Darrow, 2010). The uniqueness of these new schools and the variety of terms used to refer to this type of schooling have complicated efforts to track their growth. Additionally, since there is no one single governmental entity charged with overseeing these schools and because many states have found it difficult to track enrollment in these schools it has been difficult to provide conclusive statistics (Glass & Welner, 2011). However, recent governmental records have suggested that by 2008 there were 173 cyber charters schools serving 92,000 students (Spelling, 2008; Vergari, 2009). As of 2011, two of the largest private companies which manage most of these schools served around 120,000 students (Barth, et al., 2012). Ambient Insight (2011) a private research firm, reported that there are an estimated 217,000 cyber charter students enrolled in 220 cyber charter schools.

There are a number of terms used to describe these schools, including online charters, virtual charters, cyber schools, hybrid cyber schools, and non-classroom based charters (Glass & Welner, 2011; Huerta, Gonzáles, & d'Entremont, 2006; Klein, 2006; Vergari, 2009). They might also be associated with other virtual schooling terms such as virtual schools, online learning, e-learning, and distance education (Rice, 2006). They have recently also been associated with the term blended-learning (Barth, et al., 2012; Horn & Staker, 2011). This study will refer to this type of schooling as “cyber charter school.”

These schools “come in many different flavors” (Ahn, 2011, p. 11). Some may employ a hybrid model where students do their coursework online at home and may occasionally attend a school-like campus. Others may serve students from across school district boundaries where learning is fully online and where students might meet with

their teachers virtually. In most cases, these schools tend to rely heavily on parents or guardians to support their children's educational endeavors (Ahn, 2011; McCluskey, 2002; Schaffhauser, 2012).

While these schools are typically governed at the state level, 75% of them are managed by private organizations (Glass & Welner, 2011). Only 1% of these Educational Management Organizations (EMOs) are non-profit entities (Miron, Urschel, Yat-Aguilar, & Dailey, 2012). In any case, the EMO typically employs administrative staff to oversee and run the day-to-day operations of the school. Teachers might also be employed by the EMO, or might be employees of the public school system which has contracted with the EMO to operate the cyber charter school.

Like their virtual school counterparts, cyber charter schools have unique attributes not typically found in traditional schools, such as flexible scheduling and learning at a student's own pace. These attributes are often what draw parents to enroll their students in cyber charters and are similar to these found in virtual schools (Ahn, 2011; Erb, 2004; Revenaugh, 2005). Some may offer increased learning opportunities such as access to advanced placement (AP) courses, while others may serve rural and otherwise isolated areas. They usually have flexible schedules to accommodate students who may be young professional actors or athletes, and they are convenient for students whose health may prevent them from traveling to and from a campus. Furthermore, these schools also facilitate learning at a pace suitable for the student and offer the opportunity to catch up or get ahead academically because learning can be tailored to suit each child's needs. Some parents choose cyber charters because they provide access to customizable

education for free and because they align to parental values (Carr-Chellman, 2009; Erb, 2004).

Cyber charters also share commonalities with home schoolers in part because it has been suggested that there is an “inextricable link between home schooling and cyber charters” (Carr-Chellman, 2009, p. 4). This could be perhaps because many home schooling students enroll in cyber charters to take advantage of the benefits provided by these public schools, such as the flexibility of scheduling, perceived quality of curriculum and freedom to learn in various locations (Huerta, et al., 2006).

Cyber charter schools are unique not only in form and function but also in the elements that comprise the whole school. The technology, curriculum, students, teachers and parents/guardians are each distinctive elements that function together in ways that may be uncommon to their traditional school counterparts. Parents represent a somewhat unknown factor in these schools because little is known about them, their backgrounds or how they support their children enrolled in cyber charter schools. This has caused some concern, due in part to the fact that it has yet to be confirmed whether or not these schools can achieve academic outcomes similar to their traditional school counterparts.

To date, there is little empirical evidence concerning the effectiveness of these cyber charters schools. However, recent findings emerging from just a handful of empirical studies, state audits, investigative reports and dissertations, have presented concerning evidence that these schools are still troubled by (a) lack of oversight, (b) improper use of public funds, (c) failing grades and (d) higher drop out rates (Barth, et al., 2012; Buddin & Zimmer, 2005; Carr-Chellman & Marsh, 2009; Darrow, 2010; Glass & Welner, 2011; Hubbard & Mitchell, 2011a; Layton & Brown, 2011; Ryman & Kossan,

2011; Saul, 2011; Schaffhauser, 2012; Stuiber, Strom-Hiorns, Kleidon, LaTarte, & Martin, 2010; Zimmer, et al., 2009).

One of the main differences between cyber charter schools and charter schools is that cybers can serve students from across school district borders. This makes accountability of these schools problematic (Barth, et al., 2012; Glass & Welner, 2011; Huerta, et al., 2006; Schaffhauser, 2012). It also confounds funding because some suggest that state funds should follow the student while others believe it should be distributed based on a proportion of a district's population (Carr-Chellman & Marsh, 2009; Glass & Welner, 2011; Huerta, et al., 2006). Others accuse the private EMOs, which run 75% of cyber charters, of making off with more money than they need to operate these schools, which have minimal physical facilities (Glass & Welner, 2011; Huerta, et al., 2006; Stuiber, et al., 2010; Wisconsin Department of Public Instruction, 2010).

Even more problematic is the evidence that is beginning to surface over failing grades and high drop out rates experienced in these schools across the U.S. A handful of recent studies and investigative reports measuring the academic outcomes of cyber charter students compared to their traditional counterparts have found that in general, the cyber students are lagging behind in state and national tests on math, and have received mixed results when it comes to their reading scores (Barth, et al., 2012; Buddin & Zimmer, 2005; Center for Research on Education Outcomes CREDO, 2011; Hubbard & Mitchell, 2011a; Layton & Brown, 2011; Ryman & Kossan, 2011; Saul, 2011; Zimmer, et al., 2009). To make matters worse, a number of studies have also found that these schools experience higher drop out rates among high school students than their traditional

school counterparts (Barth, et al., 2012; Darrow, 2010; Hubbard & Mitchell, 2011b; Office of the Legislative Auditor, State of Minnesota, 2011).

Some have suggested that part of the problem for the lack of academic success in these schools could be due to the fact that these younger students do not have the skill sets or experiences to work in such independent learning environments (Cavanaugh, et al, 2004; Roblyer and Marshall, 2005). Others have suggested that these schools typically attract students who have had problems achieving academically in traditional schools, or may be at-risk students who are looking for alternative forms of schooling to better serve their needs (Zimmer, et al., 2009). Still others have suggested that these schools rely heavily on parents to support their children's educational activities and that they may not be prepared to take on such a role (Litke, 1998; Russell, 2004; Ryman & Kossan, 2011). Some have also lamented that these parents are not certified teachers and therefore may not be qualified to provide the type of educational support these students need (Ahn, 2011; Huerta & Gonzáles, 2004; McCluskey, 2002; Wisconsin Department of Public Instruction, 2010). Yet, it is clear that parents of cyber charter students play an important role educating their children. Further, it has been suggested that parents could provide the type of support necessary for students who are learning in virtual environments where teachers are not present (Liu, et al., 2010).

Parental Involvement in Education

Parental involvement in their children's education has long been thought of as a positive aspect in children's education. Over the past two decades, researchers have provided a variety of methods for understanding parental involvement and its effects on

student achievement within traditional schools. Some of these studies have focused on school-home partnerships, socio-economic status, parenting styles, and parental expectations (Baumrind, 1971; Dornbusch, et al., 1987; Eccles & Harold, 1993; Epstein, 1986, 1995; Jeynes, 2010; Lareau, 2011; Lareau & Horvat, 1999; Sui-Chu & Willms, 1996; Zellman & Waterman, 1998).

One particular group of researchers focused their studies on the parents themselves to discover their psychological motivations that contributed to parental involvement and the mechanisms, that is behaviors of their involvement (Hoover-Dempsey & Sandler, 1995; 1997; Hoover-Dempsey, et al., 2005a; 2005b). Their findings led to a theoretical model called the Model of Parental Involvement, which provided a framework for examining predictors of parental involvement as a result of psychological factors. The HDS model focused on three issues concerning parental involvement: (a) why parents become involved in their children's education, (b) how parents involve themselves and (c) why parental involvement has a positive influence on student educational outcomes. Of particular importance to this study was their findings relating to "how" parents involve themselves in their children's education. The researchers found that parents typically involved themselves in four mechanisms of behaviors, including encouraging, reinforcing, modeling for and instructing their children. This model will serve as part of the foundational framework guiding the focus of this study. It will be referred to as the HDS model and will be discussed in later in this chapter under the heading, Theoretical Framework.

Recently, two studies applied the Model of Parental Involvement during research they conducted with virtual school students and their parents. The researchers found that

the four mechanisms of behavior were also engaged in by parents of students enrolled in virtual schooling and, overall, were linked to student academic achievement (Black, 2009; Liu, et al., 2010).

In between the traditional and virtual school spectrum is the home school environment and the home school parents who have fully engaged themselves as educational facilitators for their children. In general, home-school students have fared well academically when compared to their traditional school counterparts (Ray, 2010). Interestingly, research has also found that the parents of home schoolers are typically college educated but they do not have professional teaching certificates (Bauman, 2001). This aspect alone confounds some who wonder how could non-teacher certified parents provide quality instruction that has enabled home school children to score so well on state and national tests. Several studies have suggested that one reason for their success is that parents focus on the needs of their children and provide them with support accordingly (Cai, Reeve, & Robinson, 2002; Higgins, 2008; McKeon, 2007).

Parental Support of Students in Cyber Schooling

To date, there has been little exploration of the role that parents play in children's cyber schooling. Some literature has emerged from the EMOs themselves, as well as researchers and reporters from the popular press to provide descriptive overviews of the types of tasks associated with being a learning coach (Ash, 2010; Bogden, 2003; Connections Academy, 2011; Davis & Niederhauser, 2007; K12, Inc., 2011; Revenaugh, 2005; Vergari, 2009).

However, only a few studies have provided more insight regarding parents/guardians of cyber schoolers (Black, 2009; Boulton, 2008; Klein, 2006; Litke, 1998). Three of these studies suggested that there could be links between parental support of their cyber school children and their academic outcomes (Black, 2009; Boulton, 2008; Klein, 2006; Litke, 1998). However, only one of the studies provided quantifiable evidence supporting this claim (Black, 2009). That study cautioned that still not enough is known about what the parents actually did to support their children or how they did it (Black, 2009).

Significance of the Study

This study was significant because it sought to provide deeper insight concerning the type of support parents and guardians provide to their cyber charter school students. It also sought to provide a better understanding of what type of support learning coaches received themselves and to capture their beliefs about their roles as educational facilitators for their own children.

In online schooling, where the teacher and the student are separated by space and time, young learners may face greater challenges when learning and navigating the requirements of this independent learning environment. Cavanaugh, et al. (2004) suggested that younger students enrolled in virtual learning might not have the skills necessary to be successful in virtual schooling unless the teacher stepped in to provide extra support to help them develop skills typically would acquire in adulthood. Typically, to persevere in the independent environment of distance education the student needs to be an autonomous and responsible learner who has a well-developed internal locus of

control (Cavanaugh, et al, 2004; Knowles, 1980; Moore, 1973; Roblyer & Davis, 2005). A recent white paper and an article on online schooling in Colorado found that the high dropout rates were due in part to the lack of support students received at home and at school (Glass & Welner, 2011; Hubbard & Mitchell, 2011b). Another study conducted in the United Kingdom found that more of the students who engaged in an e-learning course at home failed to complete the course compared to those students who took the e-course at school (Boulton, 2008). This was attributed in part to the lack of support students reported that they received while engaging in the course at home.

When there is a lack of teacher presence, such as in the home learning environment, the role of adult supporter may fall to the parent. Russell (2004) was concerned that relying on parents, of whom not much was known about their teaching qualifications, could be problematic. Others have also lamented that fact cyber schools rely too heavily on parents, many of whom are not certified teachers and who may not be qualified to provide the type of support these students need (Ahn, 2011; Huerta & Gonzáles, 2004; McCluskey, 2002).

Problem Statement

Liu, et al, (2010) predicted that the behaviors parents engaged in to support their virtual school students could in fact boost a child's ability to acquire and practice those skills necessary to be successful in virtual learning environments. However, others have not been so convinced. For instance, literature exploring cyber charter schools has often cited concerns arising from policy-makers, school leaders and the general public about how parents are used to support and provide instruction to their children (Ahn, 2011;

Huerta, et al., 2006; McCluskey, 2002). They are concerned over the quality of support given by parents in these schools (Butler, 2010; Russell, 2004). Some also question the system of self reporting, which they say makes it difficult when “authenticating students’ work and in measuring program quality” (Huerta, et al., 2006, p. 108). Others have questioned whether parents are actually doing the work rather than the student (Bogden, 2003). Whereas, in traditional schools parental involvement is encouraged, in cyber charters it is questioned.

If uncertainty exists over the quality of support cyber charter students receive from their parents then it is essential to develop a better understanding of these learning coaches, including how they support their students and the breadth, depth and type of support they provide to their children.

Research Questions

The purpose of this study lent itself to four research questions:

RQ1: How do learning coaches support their students?

RQ2: How do they perceive their roles?

RQ3: How do they use technology to support their students?

RQ4: What challenges do they face?

Context of the Study

To conduct this study, I recruited four parents and one guardian who served as learning coaches for their children enrolled in a cyber charter school. They represented the type of learning coach that seemed to parallel those profiled in the research reviewed in this study. They had children ranging in grades Kindergarten to 7th grade.

The study was conducted during the fall 2011 and winter 2012 semesters with participants whose children were enrolled in the Hawai'i Technology Academy (HTA). HTA was a cyber charter school located in Hawai'i. It served 1,000 students in grades K-12 on three of the Hawaiian Islands, including Oahu, Kauai and Hawai'i. During the time of the study, it was one of three such schools in the State of Hawai'i.

Methodological Overview

This study was conducted as an exploratory case study. The grounded theory approach was used because the goal of the study was to examine a phenomenon yet to be fully explored. It was an appropriate method for this study because enables the researcher to rely on an inductive process for analyzing the data, where open-ended coding can be used (Glaser and Strauss, 1967). Additionally, as I was not able to physically immerse myself in the field, grounded theory presented a viable option for observing phenomenon at a distance (Glaser, 2000).

Data was gathered from a small group of participants and included interviews, focus groups, diary logs, an online survey and an examination of resources they used to support their students. Data was analyzed using an inductive process suitable for a grounded theory approach, and included constant-comparison analysis and triangulation. (Creswell, 2008; Denzin & Lincoln, 2000; Glaser & Strauss, 1967; Lincoln & Guba, 2002).

The HDS Model as well as literature reflecting parental involvement in virtual, cyber and home schools facilitated in part the research intentions of this study by providing a collection of elements that might help form an understanding of what it might

be that learning coaches did to support their children's learning. However, these elements alone might not have captured the complete picture of learning coaches. To gain a more holistic view and to delve deeper into the beliefs and behaviors of learning coaches it was necessary to also consider the broader environmental factors surrounding and potentially influencing the participants. Bronfenbrenner's (1986) Ecological Systems Theory served as a tool for guiding a more broad understanding of the learning coaches.

Bronfenbrenner's (1986) theory calls upon researchers to look beyond the immediate surroundings and consider the micro and macro systems which influence behaviors and beliefs of a person. His theory of ecological systems includes five nested systems that influence human development. Beginning with the system closest to the person is the Microsystem, which represents the patterns of activities, social roles, and interpersonal relations experienced by the developing person. The Mesosystem, comprises the links and processes taking place between two or more settings in which the developing persons engages. The third system is the Exosystem and it is made of the links and processes taking place between two or more settings one of which does not involve the developing person, but in which events may indirectly influence him. The fourth system is the Macrosystem and it comprises the overarching structures of the three previously discussed structures and is characteristic of a culture or even a subculture. The fifth system, referred to as the Chronosystem consists of not only the time during which development takes place, but also historical events, which mark or define a particular point in time or a generation.

Bronfenbrenner's theory provided the incentive to look deeper at the learning coaches involved in this study and the environmental factors which might have

influenced their support for their children. Like a photographer with a wide-angle lens, ecosystems theory facilitated capturing a broad picture of what was going on within the boundaries defined by this study. As such, the Ecological Systems Theory provided the structure to the conceptual framework guiding this study. Figure 1 below represented the tool used to study participants, to collect and analyze the data and which was used to triangulate and validate the findings. It situated the mechanisms of parental involvement from the HDS Model squarely in the middle of this research as it represented the research questions fundamental to this study. However, the framework also included a wide range of variables extending from the literature examined here on parental involvement within virtual, home and cyber charter schooling as elements of the five nested structures found in Bronfenbrenner's (1986, 1994) theory. These components helped reflect the environment in which the participants were located. The framework also called attention to look to other factors which might have helped shed light on the beliefs and behaviors participants engaged in to support their children enrolled in the cyber charter school.

Conceptual Framework

Behaviors of Learning Coaches and Possible Influences

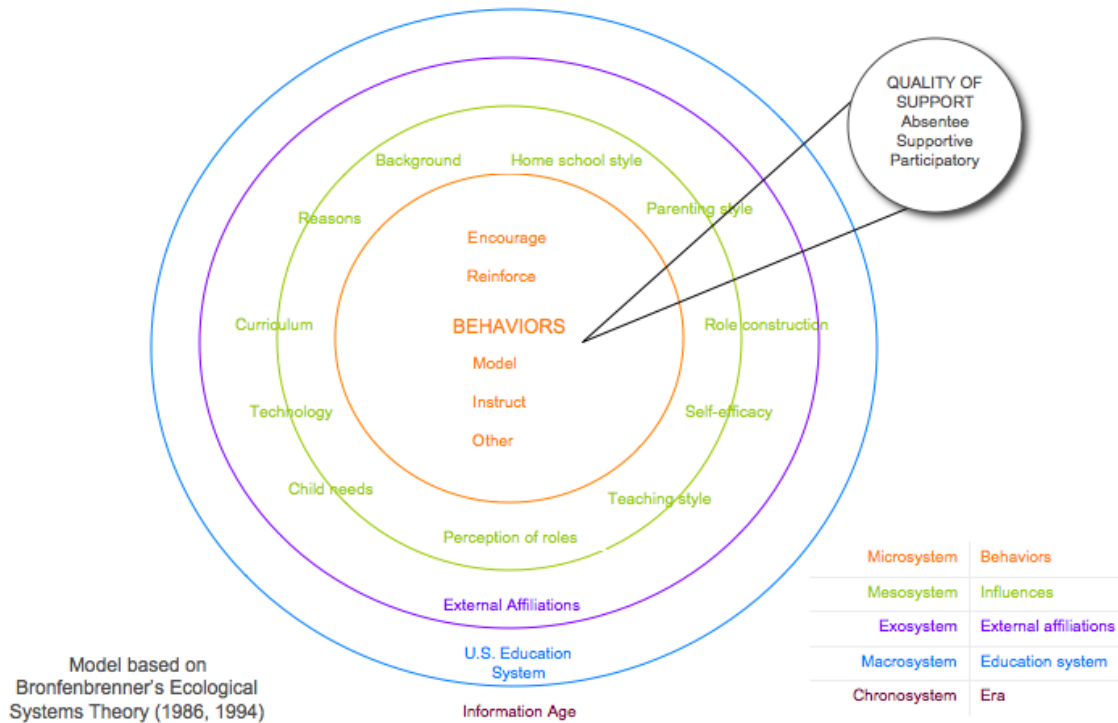


Figure 1. Conceptual Framework. Framework based on (Bronfenbrenner, 1986, 1994) Ecological Systems Theory as well as literature concerning parental involvement in children's education.

The conceptual framework was used to guide this study and served as a tool for developing the data collection instruments and for analyzing the data.

Organization of the Study

This dissertation contains five sections. Chapter 1 has provided an introduction to the study, background, a statement of the problem, research questions, context of the study, methodological overview and a definition of terms used throughout the study.

Chapter 2 contains a review of the literature concerning cyber charter schools, parental involvement in children's education and parental involvement in cyber charter schools. Chapter 3 describes the methodology and methods used to conduct this qualitative study and presents the study limitations. Chapter 4 provides the results from the data that were collected. Chapter 5 contains a discussion of the findings, conclusions, and recommendations for future research.

Definitions

Administration usually comprises a head of school, vice head of school, and an office manager. Other staff may include a registrar and an administrative assistant. The third party vendor may employ them. Administration is charged with running the day-to-day operations, enrolling students, scheduling, organizing the school calendar, proctoring exams and reporting on their progress to appropriate agencies.

Curriculum in these school is typically prepackaged by third party vendors and delivered online or offline. It can be tailored to meet state standards and is usually arranged in a linear fashion so that as the student progress through the content new materials become available, and older materials can be revisited as needed. Online materials typically include multimedia, such as videos, audio and slide shows. Links are provided to relevant content located elsewhere within the online curriculum package, and often to external websites to provide additional information. Offline materials are typically text-based and synchronized to match online content. Hands-on manipulatives, such as counters or blocks are included in the curriculum package to provide students with interactive materials.

Cyber charter schools are public institutions which are guided by charter school law. They deliver education by blending online learning, brick and mortar practices, and home schooling. Typically, they are not confined by geographic boundaries and can enroll students across school district borders. They usually employ certified teachers to provide instruction to students in a variety of ways and they engage the parents or guardians of enrolled students to serve as learning coaches for their children. These schools typically have smaller administrative staffs than traditional, brick and mortar schools because they do not have a physical campus to maintain and do not need to provide cafeteria or health services. Private, third-party vendors typically provide the curriculum, online management system and professional development for teachers, administration and learning coaches. These companies also provide computers and learning materials for students. These schools are bound by standards and must participate in annual state and NCLB exams.

Distance Education is defined by the Association for Educational Communications and Technology (AECT) as a generic, all-inclusive term used to refer to the physical separation of teachers and learners, where the application of information technology to educational and student-related activities linking teachers and students in differing places and where all communications are mediated by some type of electronic means in real or delayed time (Schlosser & Simonson, 2005).

Learning Centers are physical locations for teachers, students, learning coaches, and administration. They may be housed within business-type facilities and often do not have playgrounds or other facilities typically found on traditional school campuses. They

are used as spaces for conducting face-to-face classes, workshops, meetings, community events and they may have offices to house administration and other staff members.

Learning coaches are parents or guardians who assume a primary role as an educational facilitator supporting their children who attend cyber charter schools. Learning coaches support their children as students in variety of ways and often communicate directly with the children's teachers regarding a child's progress or special needs. They may also engage in professional development and social networking with other parents in support of their children. As part of their children's enrollment in a school which is mediated by technology, these digital immigrants (Prensky, 2001) must familiarize themselves with at least the basics of communicating online, engaging in curriculum online and using the online learning management system hosted by the school and the third party vendor.

Online Schools, also referred to virtual schools, provide asynchronous, and/or synchronous, computer--mediated interaction between a teacher and students over the Internet. They can be an be classified either as supplemental (including credit recovery) or as full-time cyber schools.

Students enrolled in these schools range in age from 5 to 17 years old, and attend grades K through 12. They are characterized by what Prensky (2001) referred to as digital natives because they have grown up with technology at their fingertips. It is a basic way of life for many of them. They learn alongside their learning coaches, their teachers and also learn on their own. Each student engages with the content via online and text-based materials. Younger students typically spend more time working offline and under the guidance of their learning coach or teacher. Older students often work more often

independently online, but they also work with their learning coaches and teachers as necessary. Students may also engage in group projects or collaborate online or face-to-face and they may engage in student-to-student learning and socialization events.

Teachers are employed by a cyber charter school or an educational management organization (EMO) to provide instruction to students and guidance to learning coaches. They may be certified public school teachers and some may also be regarded as highly qualified teachers, particularly those who are content area specialists. They may provide instruction to students online in asynchronous or synchronous modes, and they may also conduct face-to-face classes, or provide one-on-one tutoring for their students. Like learning coaches, they are digital immigrants, who must rely on technology to perform a variety of functions, from instructing to managing students.

Technology for the student serves as the tool for accessing school content and learning resources, communicating with teachers and other students, and engaging in school community and collaborative projects. Technology for the learning coach serves as a management, organization, communication and instructional tool. It also serves as a vehicle for accessing learning coach training programs and as a social networking system for engaging with other learning coaches. Technology for the teacher serves as a tool in much the same way as parents use it. However, teachers also use it to record student grades and to collaborate and engage with other teachers either within or outside of their school, while parents use it for tracking study progress and to engage with other learning coaches.

Third-party vendors are commercial entities that provide the schools with the curriculum, materials, and professional development and often serve as an authority of

operations, providing advise on hiring and school directions. These companies may also be referred to as educational management organizations (EMOs).

CHAPTER 2: REVIEW OF THE LITERATURE

Introduction

The purpose of this exploratory case study was to discover the beliefs and behaviors of learning coaches as they supported their children enrolled in cyber charter school. The objectives of this research project were: (a) to better understand the breadth, depth, and manner of educational support learning coaches provided their children who are enrolled in a cyber charter school and (b) how learning coaches themselves received support for their endeavors. Specifically, this study focused on a group of learning coaches whose children were enrolled in a cyber charter school located in Hawai'i.

Three important topics concerning parent/guardian support of students enrolled in K-12 cyber schools informed this study: cyber charter schools, parental involvement in children's education, and parental support of K-12 students in cyber schooling. A systematic process was used to conduct a search for literature and research on these three topic areas. This process involved using a number of online tools, such as Google, Google Scholar, ERIC Clearing House, and the University of Hawai'i's Voyager Library tool to access refereed journals, conference proceedings, dissertation indices and reports available from governmental organizations. Additionally, research-related books covering the three topics were borrowed from two local libraries and several were purchased online.

To conduct the searches, a variety of terms were used in order to cast a wide net across the three topics. For example, to locate research related to cyber charter schools search terms included: online charters, virtual charters, cyber schools, hybrid cyber

schools, non-classroom based charters, virtual schools, online learning, e-learning, and distance education. The most recent items covering cyber charter schools came mainly from investigative reports, legislative articles and dissertations, as the topic is relatively new. To locate research concerning parental involvement search terms included: parental involvement in education, family involvement in education, parental support in education and parental involvement in home schooling. However, these broad terms captured too wide a range of literature and so in order to better hone the research the terms were linked to “student academic achievement.” This helped to focus the items collected to those related to studies where parental involvement was found to have some effect on student academic achievement or, in the case of home schooling studies, was at least a topic of discussion within the study. The same process and terms were used to collect research relating to parental support of K-12 students in cyber schooling, except that the terms virtual, online, cyber charter school were added to refine the focus even further. Finally, citations from studies reviewed were also consulted to expand the overall review.

Cyber charter schools

Cyber charters are a cross between home schooling, virtual schooling and charter schooling, in which technology plays a central role in the delivery and management of learning. They represent the next generation of K-12 distance learning.

Evolution of Cyber Charters

In the U.S., cyber charter schools evolved from the long history of distance education. This history has paralleled many of the technologies used over last two centuries – from print to media and communications technologies, to the Internet

revolution.

Distance education has been defined by Association of Education Communications Technology (AECT) as a “generic, all-inclusive term used to refer to the physical separation of teachers and learners” (Schlosser & Simonson, 2005, p. 84). In the U.S., distance education began in print form and by 1929 the University of Nebraska-Lincoln began offering these types of correspondence courses (Clark, 2003). In the 1930s distance education evolved beyond print to include educational radio and later television. During this time, it made its way to elementary and secondary school students (Cavanaugh, et al., 2004; Clark, 2003; Molenda, 2007). For these students distance education was typically used for supplemental education purposes and was extended beyond the schoolroom to serve groups like the Boy Scouts (Clark, 2003). It had been suggested that the University of Nebraska-Lincoln may have been the first federally funded K-12 distance education program in the U.S. (Clark, 2003). As distance education began to spread across the globe, so did scholarship of this new way of learning. A sustained, growing body of knowledge began to emerge where some of the earliest pioneers of research in this field conducted studies ranging from correspondence in public schools to educational television (Black, 2007). Around the same time, several research centers focusing on distance education evolved including several in the US. As a result, more focused research began considering academic achievement of this type of schooling. A phenomenon referred to as “no significant difference”(NSD) arose as studies showed that students in distance education courses fared as well as their traditional school counterparts (Black, 2007).

During mid-19th century, the telephone emerged as another media for educational delivery. Most of these programs served continuing education and community education purposes. Clark (2003) reported on one of these programs for K-12 students that assisted migrant students in completing high school. This program was called Portable Assisted Study Sequence, or PASS. The purpose of the program was to provide more consistent school for students impacted by the nature of their families' transient life style.

By the 1980s the emergence of what would become the Internet gained ground across universities around the globe. In the U.S., some of the first Internet courses began in 1986 as part of a program called the Quantum Link Community College project, which was located in New Hampshire (Darrow, 2010).

The spread of personal computers also facilitated school use of computer-based and computer-aided instructional methods for supplemental practice and individualized instruction. According to Clark (2003) these tools, along with multimedia tools and creative interactive learning opportunities helped "set the stage for the virtual school movement" (p. 677).

With the Internet reaching beyond the walls of universities during the 1990s and expanding to the public, K-12 schools began to advantage of this new medium for delivering education to younger learners (Clark, 2003). In these early years, much of the funding for virtual schooling was supported by federal and state subsidies. One of the earliest examples of a school to provide technology delivered courses was the Utah Electronic High School. According to Clark (2003), this was followed by the Hawai'i E-School, which was the first state-operated school using only online instruction in the U.S. By 1997, the first statewide model of online schooling was the Florida Virtual School. It

was created as a cooperative effort between two Florida school districts and funded by the state. This was also the same year that the Virtual High School project began as a federally funded project. This involved a consortium of high schools that offered network-based courses (Kozma, et al., 2000).

Growth in K-12 virtual schooling kept up a steady pace throughout the first decade of the 21st century. A group of researchers began tracking the steady growth in virtual schooling across all 50 states. They produced annual reports, called *Keeping the Pace* to describe the increased number of these schools (Watson, 2005, 2007, 2008; Watson, Gemin, Ryan, & Wicks, 2009; Watson, Murin, Vashaw, Gemin, & Rapp, 2011; Watson, Winograd, & Kalmon, 2004). Figure 2 illustrates a collection of these reports and depicts the number of state-led (only) programs offered from 2004 to 2011.

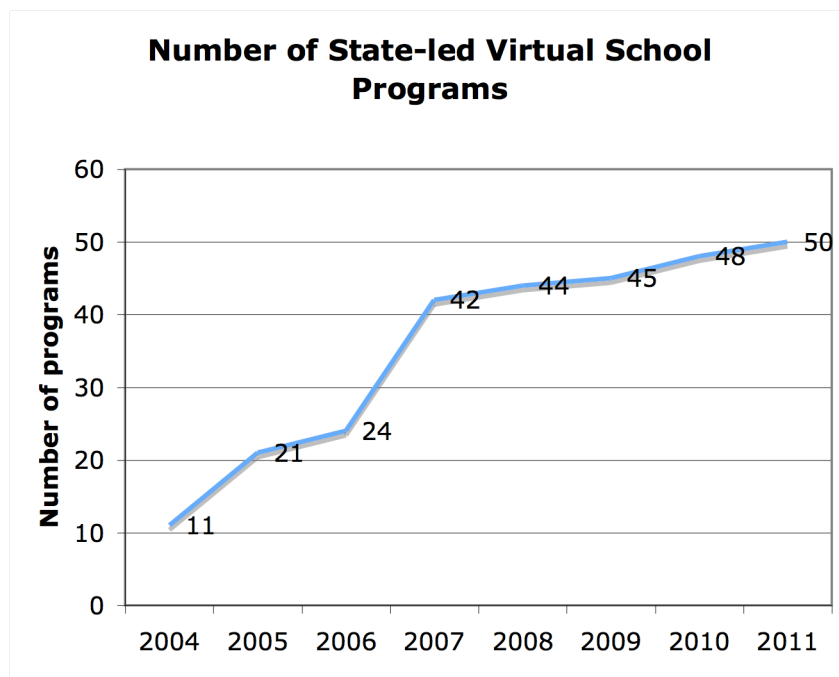


Figure 2. Number of State-Led Virtual School Programs 2004 – 2011. Diagram illustrates the growth of state-led virtual school programs. Based upon reports from: Watson, 2005, 2007, 2008; Watson, et al., 2009; Watson, et al., 2011; Watson, et al., 2004.

Enrollment numbers are somewhat difficult to come by because there currently is no single entity which tracks students and because of the wide variety of ways in which students can engage in virtual schooling (Glass & Welner, 2011). However, some available findings help give an overall picture of the enrollment growth. Clark (2001) reported that 2001 there were 40,000 to 50,000 students enrolled in virtual schools located in 14 states. By 2004 there were 24 states offering virtual schooling to 700,000 students participating in some form of virtual schooling (Clark, 2001; Tucker, 2007). However, Picciano and Seaman (2007) suggested that it was not until 2006 that this many students were served. By 2005 Smith, Clark and Blomeyer estimated that 1 in 100 U.S. K-12 public school students had taken an online course. Watson and Ryan (2007) reported that over one million students were enrolled in some form of virtual schooling in 42 states, while that same year the Sloan-C Consortium reported that there were over one million students enrolled in some form of virtual schooling.

By 2010 the numbers of K-12 students enrolled online grew to over 1.8 million, according to the most recent USDOE National Center for Education Statistics report (Queen & Lewis, 2011). This staggering number was dwarfed in comparison to a report emerging from the for-profit research firm, Ambient Insight. It found that in 2011 over four million students in the U.S. participated in some type of online course. Almost 300,000 of them were full-time virtual school students. They also predicted that by 2015 there would be an estimated 4.1 million students in full-time virtual and cyber charter schools and that 29% of all US children would be enrolled in some type of online instruction (Ambient Insight, 2011). In general, most growth of online schooling for K-12

has been occurring in single and multi-districts and expanding to serve special needs students (Watson, et al., 2011).

The term “charter” school was developed in Philadelphia’s school-within-school concept. The idea being that these schools would still operate within state traditional school guidelines, but they would be given some flexibility in the way they managed and financed their operations in order to pursue alternative ways to achieve academic outcomes. The concept was advanced and by the early 90s Minnesota had passed the first charter school law in 1991 (Darrow, 2010). According to the Center for Education Reform there were 4,600 charter schools operating across the nation in 2007.

During the mid to late 90s, cyber charters schools began to emerge – due in part to the spread of charter schools and the long history of distance education. Darrow, (2010) suggested that first online charter school was established in 1994. It was called Choice 2000 and was located in California. Others point to SusQ-Cyber Charter school, located in Pennsylvania, as the first cyber charter (Huerta & Gonzáles, 2004).

Current Status of Cyber Charters

The first decade of the 21st century saw the emergence of many cyber charter schools. From their slow birth in the mid-90s they grew with vigor. This was perhaps due in part to the emergence of the for-profit companies, which develop online content for many of the cyber charter schools today. One such company, K12, Inc. may very well be a bellwether for the type of growth realized in these schools. The company was founded in 2000 and opened two schools in 2001. By 2011, it had become the largest publicly held company supplying online content for K-12 with revenues of over five hundred

million US dollars. Today, it reportedly serves almost 100,000 students (K12 Annual Report, 2011).

The emergence of these new schools has proved challenging to track. For instance, Darrow (2010) claimed that by 2001 there were 70 online charter schools, while Huerta & Gonzáles (2004) suggested that it was not until 2003 that there were 60 cyber charter schools. By 2006 there were more than 65,000 students enrolled in online only virtual charter schools and by 2008, there were 173 cyber charters schools serving 92,000 students (Spelling, 2008; Vergari, 2009). In its 2011 annual report, K12 Inc. reported that it alone served over 90,000 students in its online school programs. Ambient Insight (2011), a private research firm, reported that there were 217,000 are cyber charter students enrolled in 220 cyber charter schools. Figure 3 below depicts the evolution of cyber charters from 1994 to 2011. It is a compilation of a number of reports concerning cyber charter schools and illustrates the steady growth of this emerging form of K-12 distance education.

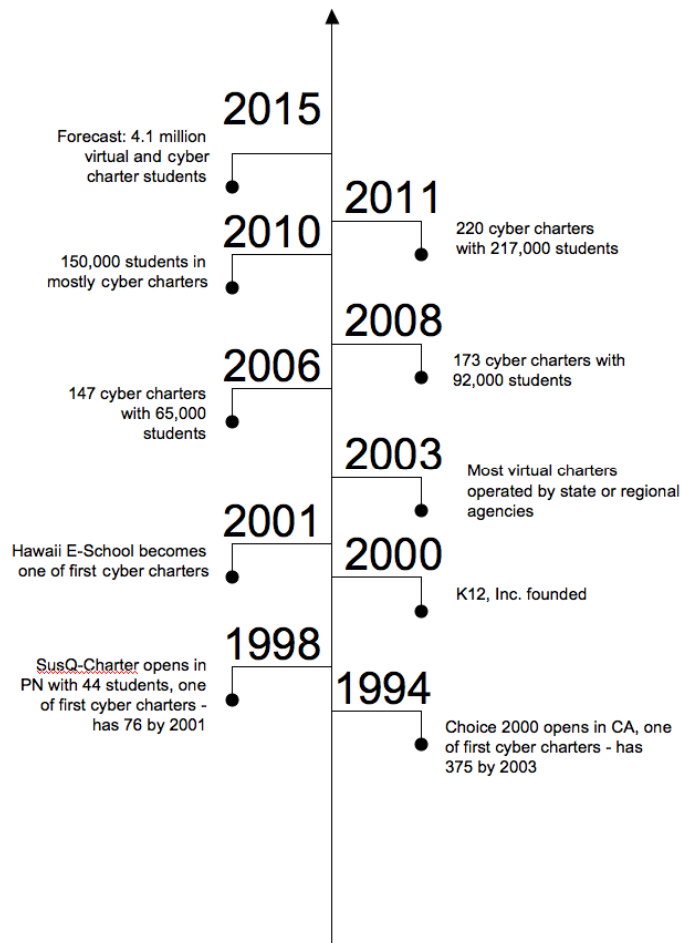


Figure 3. Growth and Evolution of Cyber Charter Schools in the U.S . Diagram illustrates growth of cyber charter schools in the U.S. Based on (Ambient Insight, 2011; Clark, 2003; Darrow, 2010; Glass & Welner, 2011; Huerta, et al., 2006; Huerta & Gonzáles, 2004; Klein, 2006; Spelling, 2008; Vergari, 2009)

Operations of Cyber Charters

There are a number of terms used to describe these schools, including online charters, virtual charters, cyber schools, hybrid cyber schools, and non-classroom based charters (Glass & Welner, 2011; Huerta, et al., 2006; Klein, 2006; Vergari, 2009). They

might also be associated with other virtual schooling terms such as virtual schools, online learning, e-learning, and distance education (Rice, 2006).

Watson, Winograd and Kalmon (2004) developed five categories describing K-12 virtual schooling, the fifth of which included cyber charter schools. The authors described these schools as being chartered within a single district but drawing students from across the state. Huerta, et al., (2006) provided a definition of cyber charter schools that presented a more visual depiction. They referred to these schools as non-classroom based charters because they delivered instruction beyond the walls typically found in brick and mortar schools.

Recently, cyber charter schools have been associated with the term blended-learning, which has been defined as "... any time a student learns at least in part at a supervised brick- and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace (Horn & Staker, 2011, p. 4).

Table 1 was adapted by Klein (2006) from the organizational depiction of virtual schooling options described by Huerta and Gonzalez (2004). The organizational chart provides a clear picture of the structure of cyber charter schools. It illustrates how the schools are organized and governed, the structures in place to support teaching and learning and where accountability typically lies. Importantly, the table shows that there is not just one formula for the operations found in these schools.

Table 1. Cyber Charter School Structure

Teaching and Learning	Organizational Model	Governance Model	Accountability Model
<i>Primary sources</i>	Computer-based instruction	<i>Immediate authority</i>	<i>Fiscal</i>
Computer software	Home-based setting	Virtual school	Charter granting agency
Third-party curriculum	Tailored mass curriculum	Teachers	Testing (if required)
External teacher	Information dissemination-based pedagogy	Third-party curriculum provider	Market driven parental choice
<i>Supplemental sources</i>		<i>Ultimate authority</i>	
Parents	Parent/teacher oversight Peer involvement	Charter school board	
Teachers	(varied)	Charter granting agency	
Resource centers	Minimal site-based learning	State regulatory agency	
Tutors	Varied educational setting		
Library			
Para-professionals			

Adapted from Klein, 2006

Ahn’s (2011) study of cyber charters located in three different states revealed that they “come in many different flavors” (p. 11). For instance, some employed a hybrid model, in which students took their coursework online and were required to come to a resource or learning center at various times during the week. Another large cyber charter system served students from across the state, where learning was fully online. Here, the

school system relied extensively on parents or guardians to deliver instruction with the help of and assessment by a trained teacher. In another example, elementary age students worked from a home-based instructional model which relied on parents or guardians to provide delivery of instruction and a teacher visited them during the week, while high school-aged students worked primarily from home but attended a school campus once a week.

While these schools are typically governed at the state level, many of them are managed by private organizations. Glass and Welner (2011) reported that over 75% of online students enrolled in full time virtual schools attended schools managed by educational management organizations (EMOs), such as K12 Inc. and Connections Academy. These educational management organizations come in two forms: for-profit and not-for profit. There were 33 states which operated with for-profit EMOs in 2010/11 (Miron, et al., 2012). These ninety-nine firms accounted for the management of 35% of all public charter schools, for a total of 758 schools. Of these, 79 were virtual schools. They served 42% of the students enrolled in these schools, or 394,096 in all public charter schools. Whereas, there were 29 states that operated charter schools with non-profit EMOs during this same time frame. These 194 non-profit entities operated 1,170 public schools. However, only 1% of these schools were virtual schools.

EMOs often employ administrative staff to manage the day-to-day operations of the schools they have been contracted to serve. They may also hire teachers to serve students. In some cases the school district contracting with the EMO will hire and manage certified public school teachers to serve students. Like their charter school counterparts, the state typically pays these EMOs 5-15% less per student enrolled (Glass

& Welner, 2011). Others suggest that these service providers receive 30-40% less than the traditional schools (Schaffhauser, 2012). In any case, Glass and Welner (2011) warned that this cost-saving provision could prove alluring for many states faced with making severe cuts to their education budgets.

Like their virtual school counterparts, cyber charter schools have unique attributes not typically found in traditional schools, such as flexible scheduling and learning at a student's own pace. These attributes are often what draw parents to enroll their students in cyber charters and are similar to those of parents who enroll their students in virtual schools. Parents enroll their students in these alternative schools because they offer increased learning opportunities, serve rural and otherwise isolated areas, offer flexible schedules to accommodate students who may be young professional actors or athletes, and they are convenient for students whose health may prevent them from traveling to and from a campus (Ahn, 2011; Erb, 2004). These schools also facilitate learning at a pace suitable for the student and offer the opportunity to catch up or get ahead academically because learning can be tailored to suit each child's needs. Some parents choose cyber charters because they provide access to customizable education for free and because they align to parental values (Carr-Chellman, 2009; Erb, 2004). Additionally, some of the reasons parallel home schoolers' choices, which may include how technology has enabled their capacity to educate at home (Andrade, 2008).

Cyber charters also share commonalities with home schoolers. For instance, in Bauman's (2001) extensive study of U.S. home schoolers, which included data for over 29,000 children, he found that many were linked to online schooling. This could be in part because technology has facilitated learning at home (Andrade, 2008). It has also

been suggested that there is an “inextricable link between home schooling and cyber charters,” (Carr-Chellman, 2009, p. 4). This could be perhaps because many home schooling students enroll in cyber charters to take advantage of the benefits provided by these public schools, such as the flexibility of scheduling, quality of curriculum and freedom to learn in various locations (Huerta, et al., 2006). However, unlike some home schooling, cyber charters are governed by state laws. They may employ certified teachers and use standards-driven curriculum, and typically, students must take standardized tests (Revenaugh, 2005). Additionally, the parent is not in complete control of the curriculum as she may be in a purely home school environment.

There is rarely a typical day at a cyber charter (Revenaugh, 2005). This flexibility is one of unique features of cyber charters: Where one student may prefer getting all his work done first thing in the morning, another may prefer working late into the night. Still, others may choose to work on math on Mondays and English on Tuesdays. The daily schedule is usually shaped by the parent and student with input and guidance from the student’s assigned teacher. In Klein’s (2006) study on cyber charter schools she discovered that parents often had a difficult time describing a typical day. They reported that each day was shaped by the needs of the child and the tasks at hand.

Components of Cyber Charters

Cyber charter schools are unique not only in form and function but also in the elements that comprise the whole school. The technology, curriculum, students, teachers and parents/guardians are each distinctive elements that function together in ways that are uncommon to their traditional school counterparts.

In the early and mid-1990s technology was seen as an important part of the school reform movement by some researchers (David, 1994; Herman, 1994; Means, 1994; Means & Olson, 1994).

Pea (2010) suggested that the current educational environment rests heavily within virtual realms where social networking and Web 2.0 tools influence the way communications take place in education. Cyber charter schools commonly take advantage of many of these forms of Web 2.0 tools to engage in communications, interactive lessons and collaboration between teacher-students and students-students (Connections Academy, 2011; K12, Inc., 2011). In fact, today, the very nature of these cyber schools is driven by technology, where they are in many ways, “an enterprise mediated entirely by technology” (Cavanaugh, 2009, p. 7).

Freedman (2005) described how technology enabled these virtual schools to operate in a flexible environment where they could respond to evolving data on student achievement and to make adjustments where necessary.

In cyber charter schools, teachers use technology synchronously and asynchronously to deliver instruction to students and to communicate with them. For example, they may use an online presentation application, such as BlackBoard Collaborate™, to conduct class or to engage in a collaborative project (Cavanaugh, 2008). They may work with a student individually using a chatroom, or some other online interaction tool. Teachers also use the third-party vendor online learning systems (OLS) to monitor their students and to access content and instructional materials. There are a variety of ways in which teachers use technology to communicate with students and their

learning coaches. For example, they may email, text message, or instant message students and learning coaches.

Learning coaches also have been noted to “make good use of technology” (Klein, 2006, p. 116). They use it to communicate with the school and with the students’ teachers. They are responsible for using the online learning system (OLS) for recording their children’s’ progress and attendance, and may guide their students’ through the online content. Often, the third party vendor and the cyber charter school itself will offer learning coaches training programs online, and coaches receive most of the school and student updates through the OLS.

However, these technologies can also present challenges. For example, Klein’s (2006) study of four cyber charter schools in California, revealed that some parents, and teachers reported that technology could be disruptive to learning because students may get distracted. Without proper technical support parents and students may flounder or find technology frustrating. Her study also exposed problems relating to communication between parents and teachers, and parents and the schools. Some parents reported that miscommunications led to misunderstanding over expectations. This finding was also revealed in a pilot study with a group from a cyber charter school, in which parents reported that there were numerous occasions where the school did not communicate with them in an effective or timely manner and this led to many of the frustrations they experienced when trying to manage their children’s schooling (Hasler-Waters & Leong, 2010).

Some cyber charter schools offer a variety of curriculum choices, while others ascribe to just one package (McCluskey, 2002). In the latter situation, a third-party

commercial vendor typically provides curriculum and management (Huerta & Gonzáles, 2004) and usually outfits each student with curriculum-related materials, such as text books and manipulatives, a computer and various hardware, like a printer, headset, and microphone. Some schools may even reimburse families for a portion of their Internet subscriptions.

Two of the largest EMOs, K12 Inc., and Connections Academy, are well known for providing ready-to-use school materials. These for-profit entities develop the online and text-based curriculum as well as much of the resource materials. They bundle the curriculum and materials along with parent-guide books, manipulatives and computers, which are pre-loaded with applications and links for access to the online learning system. The curriculum, which may be tied to state standards, is usually organized sequentially so that as a student progresses through the curriculum he is directed to the next level when he has successfully mastered the required content. Huerta, et al. (2006) referred to this type of curriculum as information dissemination-based pedagogy.

Often, most information on the quality of third party vendor curriculum arises from the vendors themselves. On the website of Connections Academy they stated that 93% of parents gave the program high ratings and 96% gave the CA curriculum high ratings (Connections Academy, 2011). The website of K12, Inc. described that 95% of its parents strongly agreed or agreed that the curriculum had benefited their children academically, while 96% of parents were very satisfied with the curriculum (K12, Inc., 2011). Klein's (2006) study supported K12, Inc.'s claims. She found that 100% of parents involved in her study reported that they strongly agreed or agreed that the K12,

Inc. curriculum was high quality and 98% strongly agreed or agreed that the K12, Inc. curriculum had met their academic standards and expectations.

However, two reports conducted by researchers at the Education Policy Studies Laboratory at Arizona State University presented critical reviews of K12, Inc. Ohanian (2004) referred to the K12, Inc. curriculum as “back-to- basics curriculum.” To conduct her study she purchased and reviewed the curriculum and focused most of her research on Kindergarten to 2nd grade history lessons. She claimed the curriculum was infused with religious overtones, although it “rarely provides a moral message” (p. 2). Where these for-profits touted their use of computer technologies as progressive and reflective of providing a 21st Century Skills pedagogy, Ohanian (2004) suggested otherwise finding that the curriculum pushed memorization of facts as opposed to higher order thinking. She said that K12, Inc. used software as a tool to provide bookkeeping rather than to facilitate learning.

In another report, Bracey (2004) conducted a rather deep investigation into the motives behind K12, Inc. and its parent company, Knowledge Universe (KU) which is owned by Michael Milken of junk bond and insider-trading infamy. He described KU as a holding company that made investments, including in the area of education, which had woven a complex web of links to drive attention away from its for-profit seeking motives. Like Ohanian (2004), he criticized K12.Inc.’s claim of providing highly individualized instruction centered on each learner, as curriculum driven by memorization of the facts which is more like 19th century learning rather than 21st century education. Ultimately, he hoped that his investigations would raise red flags and he –

lamented that, “who controls what is taught remains in play” (Bracey, 2004, p. 24) implying that left unchecked public schooling could become nothing more than a well-packaged consumer item.

Although to some these reports may read more like opinion pieces rather than scientifically based evaluations of the curriculum, they do offer insight into the potential problems schools may encounter if they do not carefully measure their missions with the curriculum they administer. Watson, et al. (2009) cautioned that while it could appear that these types of pre-packaged programs could be cost effective, it was more important that “budget-strapped administrators...ask whether the content is imaginative and engaging and whether teachers are able to meaningfully interact with students” (p. 44).

In most cyber charters, the student is assigned to a teacher, who may be certified, and who is responsible for reporting student academic achievement, providing instruction, conducting assessments, and evaluating the student’s work and progress. Some cyber charters provide a physical location where students can receive classroom-based instruction and engage in traditional school-like social activities, such as working in groups, doing community service projects, attending field trips and engaging in social events like holiday celebrations (Bogden, 2003; McCluskey, 2002). Others require that students attend at least one course or a full day at the school’s physical campus, while some may require more or less face-to-face time (Van Dusen, 2009).

Cyber charter schools tend to serve unique student populations. This may be due in part because the students who enroll in these schools and their parents purposefully seek out alternative education models (Erb, 2004). Some students may include those “who were falling through the cracks” at traditional schools (Ahn, 2011, p. 9). Others

may come from at-risk backgrounds, and some students have special needs (Darrow, 2010; Hubbard & Mitchell, 2011a). Still others may be considered gifted or advanced, while some may come from home school environments (Klein, 2006). These descriptions tend to reflect those found for virtual school and home school students and suggest that these schools serve a wide variety of students.

There is some concern that younger students enrolled in virtual courses may not be prepared to learn in such autonomous environments. Cavanaugh, et al. (2004) suggested that younger students enrolled in virtual learning might not have the skills necessary to be successful in virtual schooling unless the teacher steps in to provide extra support. To be successful in distance education the student needs to be an autonomous and responsible learner who has a well-developed internal locus of control (Cavanaugh, et al, 2004; Knowles, 1980; Moore, 1973; Roblyer & Davis, 2005). Further research should help elucidate whether or not cyber charter schools provide the support needed for these young students.

Teaching in a K-12 virtual school requires a new set of skills, not all of which may be required of teaching in the traditional classroom (Van Dusen, 2009). For example, there are certain characteristics which have been found to be part of the practices performed by highly qualified virtual school teachers. Successful online teachers typically (a) tend to be flexible with their time and go “the extra mile” to support students, (b) are skilled with technology and enjoy exploring new technologies to support learning, (c) tend to be experts in their content areas, (d) have a deep understanding of individual student learning styles and establish an online presence to keep students motivated, and (e) have good organizational skills and use course data to revise and

improve their teaching to suit the students' needs (DiPetro, Ferdig, Black, & Preston, 2008). Many states are beginning to require that teachers employed at online schools should have online training to better support their students (Glass & Welner, 2011; Stuiber, et al., 2010).

Two of the larger private online charter school vendors describe that teachers play a vital role supporting their students and the parents and guardians tasked with overseeing their students (Connections Academy, 2011; K12, Inc., 2009). Teachers can work one-on-one with students online or face-to-face or they may work with groups of students in on and offline classroom settings. Many also hold office hours, proctor exams, grade assignments and may conduct group work or take students on field trips.

However, teaching in this environment has been proven to be challenging, not simply because of the added dynamics of using technology to instruct students, but also because of the new roles these teachers must assume (Murphy & Rodriguez-Manzanares, 2009). Some teachers may feel isolated because they do not have the same peer support with their colleagues or interactions with their students as they might have had in traditional school settings (Hawkins, 2011). Moreover, sharing their role with parents to provide instruction to students can be another dynamic that some teachers have not been fully prepared to realize (Litke, 1998).

The parents and guardians of students who enroll in cyber charter schools tend to play a significant role in the education of their children. They are typically responsible for overseeing the progress of their children's academic endeavors and usually track attendance using a schools online management system. They are also expected to help organize the student's daily agenda, provide guidance and procure learning materials and

resources as necessary. To help them understand their role Connections Academy has parents sign a contract acknowledging their role in monitoring their cyber charter student (Connections Academy, 2011). K12, Inc. calls its parents and guardians “learning coaches” and explains that they are responsible for helping facilitate their children’s progress through the daily lessons and working to modify the pace and schedule according to their children’s needs (K12, Inc., 2009). Parents are usually provided with guides and lessons plans to help their children and are given training on how to navigate the OLS. According to K12, Inc., learning coaches can expect to spend between three to five hours per day assisting children in grades K-6, two hours per day for middle school students and during high school, parents are expected to “step back,” but still play a role to help the student stay on track and to make sure he completes his assignments.

Emerging Concerns

To date, there is little empirical evidence concerning the effectiveness of these cyber charters schools. In the earlier part of the decade, a handful of reports outlined concerns with the way the schools were being managed and the lack of accountability required by these fledging schools. More recent findings have emerged from just a handful of empirical studies, state audits, investigative reports and dissertations and have presented concerning evidence that these schools are still troubled by (a) lack of oversight, (b) improper use of public funds, (c) failing grades and (d) higher drop out rates.

One of the key differences between cyber charters and charter schools is that cybers can serve students from across school district borders. This freedom from the

“shackles of geographic boundaries” (Bogden, 2003, p. 33) challenges the governance of these schools because it makes accountability and funding problematic (Ahn, 2011; Barth, et al., 2012; Carr-Chellman & Marsh, 2009; Schaffhauser, 2012; Vergari, 2009). There is concern over who is ultimately in charge of managing these schools and whether or not public agencies have the ability to monitor the teaching and learning that takes place in a private residence (Barth, et al., 2012; Huerta, et al., 2006). Furthermore, there are very few agencies to help evaluate or provide reliable accreditation services for these relatively new forms of schooling (Glass & Welner, 2011)

State governments have recently addressed some of these concerns. In 2007 individuals from the Wisconsin Education Association Council filed suit against the Northern Ozaukee School District primarily because it was enrolling students from outside its district boundaries and as a result they accused that it was improperly drawing funds from other school districts. The Council alleged that the operation of district’s Wisconsin Virtual Academy, a cyber charter school which enrolled students from across the state, violated several state statutes (Phan, 2008). The state court ruled in favor of the Council finding that the state’s statutes prohibited a school board from establishing a school located outside the district. It also imposed that open enrollment students attend a school in the district in which they are enrolled and required that all teachers in the state’s public schools have proper licensing. Ensuing arguments and debate within the state legislature resulted in the passage of Act 222, which included well-defined authorization for virtual charter school operation and the creation of accountability measures. Among the details, the Act required that for open enrollment, the virtual charter school must be located within the school district that had contracted with and that any person who

teaches in a public school must be licensed by the state's Department of Public Instruction. This last provision represented the most contentious of debates because of the fact that parents were engaged in teaching their children and some contended they should therefore be required to have a license. However, Act 222 resolved the issue by exempting parents and other persons providing educational services in the student's home from having to have a license to teach.

In Colorado a recent report conducted by the Education New Colorado and I-News Network found that even after a 2006 audit accused the State's Department of Education for lax oversight of its virtual charter schools the lack of accountability still continued (Hubbard & Mitchell, 2011a). The report collaborators analyzed data available from public records and interviewed education officials concerning the progress made to oversee these schools. They uncovered a series of incidents showing that while lawmakers and school officials tried to oversee the schools with more efficiency, they were unable. Several attempts to sanction poorly performing schools were nullified. This was primarily due to what they reported as "politically connected" schools.

A report concerning online charter schooling in Arizona lambasted the state for its failure to disclose adequate information that would demonstrate accountability of these schools (Ryman & Kossan, 2011). One of the problems the reporters found was that the state allowed the schools to self-report on student enrollment, completion rates and the types of services they provided for special-needs students. However, there was no independent method employed to verify the accuracy of the reports provided by these schools. Furthermore, just like the State of Colorado, there were no proctoring requirements for state exams and some were concerned that lack of oversight made

cheating a potential problem. Additionally, there was little oversight concerning the quality of teaching in these schools because the state did not have any provisions in place requiring teachers in these schools to obtain online teacher training or to be certified online teachers.

The State of Minnesota has faced similar issues related to accountability. An evaluation of the state's online schools conducted by the Office of the Legislative Auditor found that the Department of Education needed to redesign its re-approval process for online schools to focus more attention on student performance and to assign sufficient staff to carry out the online learning responsibilities (Office of the Legislative Auditor, State of Minnesota, 2011). The report found that there was little direct state oversight of school districts and charter schools who enrolled their own students in online courses and that only those charter schools wishing to enroll students outside their districts had to seek approval from the Department of Education.

The problems associated with accountability were coalesced into a report produced by the Center for Public Education and the National School Boards Association. Its researchers called for "greater oversight and accountability to ensure virtual charter schools receive funding for those students they are actually educating" and added that tax payers should be concerned over where and how their money was being spent in these schools (Barth, et al., 2012; Schaffhauser, 2012, p. 15).

There has been extensive debate concerning how to fund cyber charter schools. These debates question whether funding should follow the student or be distributed based on proportion of a district's population. And whether start-up and maintenance costs are equal to the funding required for traditional schools (Barbour & Reeves, 2009; Carr-

Chellman & Marsh, 2009). Some have campaigned against cyber charter schools claiming that their geographic freedom siphons funds from local schools and takes monies away from in-state departments of education by out-sourcing curriculum and management to out-of-state private vendors (Wisconsin Parents Association, 2002). And still others fear that the for-profit entities, which run 75% of the online charter schools, are reaping financial rewards and forsaking quality education (Glass & Welner, 2011).

Two of the earliest cases concerning funding of cyber charter schools took place in Pennsylvania and California. In Pennsylvania, funding for one cyber charter school, which served students across the state and which relied on school districts where its students resided to forward tuition payments, led to a fiscal crisis because schools refused to forward tuition to the cyber charter. As a result, the cyber charter could not pay many of its bills. The Pennsylvania Department of Education withheld almost one million dollars in state aid from school districts that refused the cyber charter its tuition. This led to a fierce public debate over who was ultimately accountable for funding cyber charter schools and whether or not the schools, which were viewed as operating more like home schools, were in fact permissible under the state regulations for educational status. The growing problem resulted in a lawsuit in which the Pennsylvania School Boards Association and four of the state's school districts challenged the requirement that school districts pay cyber charter schools a local portion of their per-pupil revenues and whether or not cyber charters were in fact legitimate entities according to the state's charter school laws. This was only the beginning of lawsuits extending from other districts and from public debate over the legitimacy of these cyber charter schools. The issue was finally resolved when the state's legislature passed Public School Act 88, which explicitly

defined cyber charter schools as public schools and which required that they be granted charters only by the Pennsylvania Department of Education. It also codified funding stating that was the responsibility of the student's resident school district to make payments to a cyber charter school that the student chose to enroll in. However, it also enabled school districts to dispute forwarding tuition and to reach a resolution through due process. Finally, the Act described that a cyber charter would be held accountable for its ability to demonstrate community support, to provide students with comprehensive learning experiences, and to develop students capable of meeting state standards, among other obligations (Huerta, et al., 2006).

In California, outrage ensued over profiteering by for profit companies, which reaped the benefits of receiving full funding for operating public schools with little facilities and smaller staff. This ultimately resulted in a drastic reduction of state funds allocated to these schools compared to their traditional school counterparts (Huerta, et al., 2006). In a similar turn of events, the State of Arizona had problems tracking costs and allocating proper funding to its online charter schools because of problems associated with its electronic data recording (Ryman & Kossan, 2011). As a result, some of the schools received only partial funding for students that the served.

A recent investigative report concerning Colorado's online charter schools found that traditional schools were losing out on millions of dollars in student funding because they had to absorb those students who dropped out of the online schools, yet the funds to education them stayed with the virtual schools and the parent companies managing them. One school in particular lost 39 students to virtual schools only to see almost a quarter

million dollars in funding follow them. Later, a dozen students returned to the traditional school mid-year but the funding for their education stayed with the online charter school.

Glass and Welner (2011) have warned against what they called the privatization of public schools. This, they found, is being made possible because the K-12 virtual schooling sector is dominated by private business. Compounding the issue is the fact that these for profit corporations have spent considerable funds lobbying to win the minds and loyalty of politicians who continue to support the expansion of virtual schools. Their reward has been “a portion of the half-trillion” dollars spent on public education (p. 11). Troubling them is concern that there is still a lack of evidence suggesting that these schools can achieve the same academic levels as their traditional school counterparts.

An ongoing question concerning K-12 virtual charter schooling is whether or not students in these environments achieve academically as well as their traditional school counterparts. There are a number of issues confounding this question. While one recent report produced by the U.S. Department of Education found in favor of the positive academic outcomes found in blended learning, its authors warned that, “Despite what appears to be strong support for blended learning applications, the studies in this meta-analysis do not demonstrate that online learning is superior as a medium” (Means, Toyama, Murphy, Bakia, & Jones, 2009, p. xviii). Additionally, because the majority of the studies included in the report concerned higher education, the authors cautioned that still not enough was known about online learning in the K-12 environment.

Echoing this sentiment, Glass and Welner (2011) produced a policy brief in part to analyze the political and economic forces shaping the growth and use of online

learning the U.S. and also to address concerns over the lack of empirical evidence demonstrating the academic effectiveness of these schools. Their report, which relied on available research covering student achievement in virtual schools found that there was a severe lack of evidence demonstrating the effectiveness of student learning and achievement in full time virtual schools. They warned that without such key information states should not look to expand full time virtual schooling.

A more recent report conducted by the Center for Public Education and the National School Boards Association corroborated Glass and Welner's (2011) concerns. They found that there was such a substantial lack of evidence supporting student achievement in supplemental and full time virtual schools that legislatures need to consider this before they expand virtual learning opportunities to K-12 students (Barth, et al., 2012).

The lack of empirical evidence supporting student achievement in these schools is due in part because of the newness of these types of virtual schools (Ahn, 2011; Cavanaugh, et al., 2004; Means, et al., 2009; Rice, 2006). This may also be attributed to the fact that they are primarily run by for-profit companies which may be unwilling to be subjected to independent research (Barbour, 2011).

Some evidence is mounting against the ability of these schools to help their students attain national and state test scores similar to their traditional classroom counterparts.

In one of the few studies comparing the achievement of students in nonclassroom-based charter schools with their traditional school counterparts (Buddin & Zimmer, 2005) provided a dismal assessment. They collected data from the California Department of

Education on elementary and secondary students who took the Stanford 9 test between 1998 and 2002. The data represented 21.3 million students, of which 1.5% or 326,000 were enrolled in charter schools (both classroom and non-classroom based). They discovered that non-classroom based charter schools had much lower test scores in reading and math than did their traditional school counterparts. However, they warned that the underlying reasons for the poor performance were not obvious and may have been due to the fact that students in these alternative schools may have had learning needs not met by traditional school methods. Furthermore, they alleged that “if non-classroom students have been pulled out of conventional public schools because of problems in traditional settings, then conventional students who do not have these problems do not make a good comparison” (p. 366). Other reasons for the poor performance may have also included differences in instructional practices, curricula, expenditures or other institutional factors such as chartering policies. Readers should note one caveat concerning the 2003 report: Even though the non-classroom based schools discussed by the authors relied heavily on computer instruction, they were not all considered online charter schools. Rather, they represented a mix of schools that could have included in addition to distance learning, home schooling and independent study practices.

In a subsequent study, Zimmer, Gill, Booker, Lavertu, Sass and White (2009) expanded the previous study of charter schools to include seven additional states. While the study was on charter schools in general, one important finding concerned online charter schools. They discovered that when they considered achievement gains for students enrolling in Ohio’s charter schools, which entered students at Kindergarten,

there was a significant and substantial negative gain. They attributed this to virtual charter schools because they constituted a large part of the enrollment of K-entry charter schools in Ohio.

A more recent study conducted by Stanford University's Center for Research on Educational Outcomes (CREDO) studied charter schools in Pennsylvania and discovered that all eight of the cyber charter schools included in the study performed significantly worse than their traditional school counterparts (2011). The report covered academic achievement growth at charter schools in Pennsylvania over a four-year period. The researchers discovered that most students who attended the eight cyber charter schools included in the study profiled as White, not able to receive Free or Reduced Lunches and were most likely repeating the grade they had left from the traditional school they previously attended. The report which compared reading and math scores from state exams between traditional schools and charter schools found that those students who enrolled in brick and mortar charter schools outperformed cyber charter students and in many cases, their learning gains were not significantly different than those received by the traditional school students. The study recommended that policy makers should develop systematic, thorough and well-designed charter authorization processes and that "Without a vigorous focus on quality, the charter sector as a whole is put at risk by those schools that consistently under-perform compared to their traditional public school peers" (p. 20).

Four recent audits concerning virtual student achievement scores on state exams in Colorado, Wisconsin, Minnesota and Arizona also showed less than favorable results. In Colorado, reporters found that full time virtual school students underperformed their

traditional school counterparts (Barth, et al., 2012; Hubbard & Mitchell, 2011b). This inquiry was conducted over a 10-month long investigation into the state's full time virtual school. There were 2,729 online school students who took state reading tests in both 2009 and 2010. Sixty percent were proficient in 2009 but that number fell to 54 percent the following year. Furthermore, students who switched from traditional schools to virtual schools saw their reading proficiency drop from 58 percent when they last attended the traditional school to 51 percent in the virtual school.

Auditors for the State of Wisconsin analyzed test scores of virtual school students over a recent three-year period and compared them to test scores of pupils in other public schools during the same period (Stuiber, et al., 2010). They found favorable results from the reading test scores of virtual charter students, but lower achievement rates from the same students when comparing their math scores with their traditional school counterparts.

Results from a state of Minnesota audit of online learning concluded results similar to those from Colorado and Wisconsin: virtual school students scored comparable to their traditional school counterparts in reading, but lower in math (Office of the Legislative Auditor, State of Minnesota, 2011). The audit found that between 2008/09 and 2009/10 its full-time online students in fourth to eighth grade made only about half as much progress on the state's standardized math tests as their traditional school counterparts. They did, however, keep pace with them on reading tests.

A report by Arizona Republic found problems similar to those found similar problems to those encountered in Colorado, Wisconsin and Minnesota: Its virtual charter students were failing to perform at the same levels as their traditional school counterparts

(Ryman & Kossan, 2011). The authors lamented that further complicating poor student achievement was the fact that some of the larger state online school providers did not require in-person proctoring of final exams. Additionally, an audit in 2007 by the State of Arizona's Auditor General's Office found that the state had no way to verify the number of hours students and parents reported doing course work and that it could not determine whether or not the online courses improved student learning.

In the last quarter of 2011 a number of articles hit the popular press corroborating the findings of the audits and questioning the quality of education in virtual schools. In particular, two investigative articles produced by reputable national newspapers showed that low student achievement scores were found in a number of online charter schools that were part of the K12, Inc. family of schools. The New York Times article reported on its findings of the Agora Cyber Charter School, which enrolled an estimated 4,800 students across the state of Pennsylvania (Saul, 2011). After conducting interviews with staff, teachers and parents and conducting reviews of the school's operations, finances and performance records, it found that 60% of its students were behind a grade in math and 50% in reading.

The Washington Times also conducted an investigation into the academic achievement of students who attended K12, Inc. virtual schools in Ohio and Colorado. It found that only about one third of the schools it managed nationwide met the achievement goals required by NCLB (Layton & Brown, 2011). The authors also found that students from the K12, Inc. schools had low on-time graduation rates compared to statewide statistics. For example, the Colorado Virtual Academy, which had enrollment of over 5,000 in 2010, faced an on-time graduation rate of just 12 percent versus the

state's traditional school students who achieved an on-time graduation rate of 72%. Likewise, the company's Ohio Virtual Academy schools, which enrolled over 9,000 students during the same period had a 30% on-time graduation rate compared to the statewide average of 78%.

Compounding the issue of failing grades and lack of on-time graduation there have also been findings pointing to higher drop out rates among full time online high school students. For instance, Darrow (2010) found that California's online students dropped out at higher rates compared to their traditional school counterparts. The objective of his dissertation was to determine if at-risk students were more successful in the online schools. The study included ten online charter schools with a total full-time student enrollment of 2,734 in 2009 alongside a random sample of ten traditional high schools with a full-time student enrollment of 21,261 in 2009. He discovered that over a two-year period, 2007/08 and 2008/09, the number of students who dropped out of high school was greater in the online charter schools compared to the traditional schools that he measured. Specifically, he found that the dropout percentage for students in online charter schools was between 22% to 59% while the dropout percentage for students in the traditional schools ranged from 0.5% to 4%. He concluded that there were a disproportionate number of at-risk students enrolled during this period at the online charter schools because there were higher percentages of students who dropped out of these schools compared with their traditional school counterparts. Unfortunately, the data he collected were not able to explain why there was such a high dropout rate among the online charter school students.

A Minnesota audit found that between 2006/07 and 2009/10 the drop out rates for its full-time online students increased (Office of the Legislative Auditor, State of Minnesota, 2011). While eighteen percent of 12th grade students dropped out during the 2006/07 school year, that percentage had grown to 25% of seniors during the 2009/10 school year. Moreover, they found that the traditional school seniors had only a 3% drop out rate at the end of the same period.

Colorado faced similar concerns over the high drop out rates of its online students. Investigative reporters found that half of the state's online students left online schools within a year. More troubling they discovered that when these students returned to the traditional school they were further behind academically than when they started (Barth, et al., 2012; Hubbard & Mitchell, 2011a). In the fall of 2008, around 5,600 of the 10,000 who enrolled in virtual schools left those schools by the fall of 2009. The following year, over 7,400 new recruits enrolled in the virtual schools and also experienced high turnover, with more than a third leaving by the end of that school year. Finally, by fall 2010 only a quarter of the students stayed in the same online program after two years. They also discovered that the online schools produced three times as many dropouts as they did graduates.

Some have suggested that part of the problem for the lack of academic success in these schools could be due in part to the fact that these younger students do not have the skills sets or experiences to work in such independent learning environments (Cavanaugh, et al, 2004; Roblyer and Marshall, 2005). Others have suggested that these schools typically attract students who have had problems achieving academically in traditional schools, or may be at-risk students who are looking for alternative forms of

schooling to better serve their needs (Zimmer, et al., 2009). Still others have suggested that these schools rely heavily on parents to support their children's educational activities and that they may not be prepared to take on such a role (Litke, 1998; Russell, 2004; Ryman & Kossan, 2011). Some have also lamented that these parents are most likely not to be certified teachers and may not be qualified to provide the type of educational support these students need (Ahn, 2011; Huerta & Gonzáles, 2004; McCluskey, 2002; Wisconsin Department of Public Instruction, 2010). Yet, it is clear that parents of cyber charter students play an important role educating their children (Black, 2009; Borup, Graham & Davies, 2011). Further, it has been suggested that parents could provide the type of support necessary for students in environments where teachers are not physically present (Liu, et al., 2010).

Parental Involvement in Education

Parental involvement in their children's education has long been thought of as a positive aspect in children's education. Over the past two decades, researchers have provided a variety of methods for understanding parental involvement and its effects on student achievement within traditional schools. Some studies, which have found that parental involvement in student educational outcomes could be linked to student educational outcomes, have focused on school-home partnerships, socio-economic status, parenting styles, parental expectations and parental psychological motivations.

Epstein (1991, 1995), who is credited with providing some of the earliest and most influential work on parental involvement in student education, theorized that the school-home relationship was an important construct linking to student achievement and

could be enhanced by involving parents in school-related activities. Her theoretical model included six types of school-home relationships that were purported to be beneficial to student academic success. These activities included (a) helping to promote a home environment supportive of students, (b) establishing effective communications between school and home, (c) encouraging and making opportunities for parents to volunteer in the school, (d) promoting familial involvement of student learning at home, (e) including parents in school decision making, and (f) integrating community resources into the school. In particular, she emphasized that parent actions at home, such as discussing their children's school experiences and helping them with their schoolwork were particularly important. She conducted a quasi-experimental study with 1,269 parents of students in grades 1, 3, and 5. Her goal was to assess their attitudes towards the schools, teachers and their experiences with different kinds of involvement activities and communications with the schools. The experiment involved two sets of teachers: one group who were identified as the case teachers and who were known to be supporters of parental involvement and the second group, or control group, of teacher who did not emphasize parental involvement. She discovered that parents of students whose teachers were identified in group one, the supporters of parental involvement, were more positive about the schools. Yet, overall, she found that parents thought the teachers could do more to involve parents in student learning activities at home. And, interestingly, over 80% of the parents reported that they could spend more time helping their students at home if they were shown how to do specific learning activities.

Some of her more recent work has focused on strengthening the objectives included in the NCLB act to encourage all families to become involved in their children's education (Epstein, 2005).

As a result of Epstein's work, numerous strategies emerged offering more effective collaboration approaches between parents and schools. For instance, Eccles and Harold (1993) suggested that schools consider implementing methods to enhance teacher-parent collaboration through working together in order to support student development. Their research found that as children matured, parents were less involved in their academic pursuits. This, they found was problematic because they asserted that in deed, students in their middle school years needed more support from both family and non-family adults. Using Epstein's (1991) typology of parental involvement activities they sought to promote increased parental involvement, and meaningful age-appropriate opportunities for parents of children in their early adolescences.

Others have determined that socioeconomic status (SES) and race could shape key interactions in schools. To understand how the rituals of daily life that families experienced and the influences of those practices on the development of children's academic success Lareau (1999) engaged in a qualitative study with 88 third-grade children. They were from middle-class, working-class and poor families. She found that middle class families engaged in practices acceptable and supported by most American institutions, beginning with schools. These practices benefited middle class children in ways which helped them to be successful in school. Ten years later, she revisited twelve of the children from the original study and found that "over time the gap that existed between the families [middle class compared with working and lower class families]

when the children were young widened” (Lareau, 2011, p. 310). The young adults from middle class families were well on their way to succeeding in American institutions compared with the students who were from what she categorized as working and lower class families.

In another study, Lareau and Horvat (1999) found that race also played a role in parental involvement in their children’s education. They interviewed 12 white families and 12 black families across the SES spectrum and discovered that while middle class black families still tended to benefit from their class position, they still faced institutional policies that privileged white families and that race, separate from SES, shaped the school experiences of these young black children differently from their middle class white counterparts.

Contrary to Lareau and Horvat (1999), Sui-Chu and Willms (1996) rejected the notion that SES or ethnicity played a role in parent participation levels. They studied 1,052 schools of children from elementary to middle school. Ultimately, they hoped to determine whether individual parental background, or SES, could be attributed to student academic achievement, or whether the overall levels of parental involvement in the schools contributed to student achievement. To engage in their study, they used data from the National Educational Longitudinal Study, which included 24,599 eight-grade students and their parents and teachers drawn from 1,052 schools across the U.S. They selected 12 indicators of parental involvement, which they subsequently narrowed into four separate constructs: (a) home discussion, (b) school communications, (c) home supervision, and (d) school participation/volunteering. They found little evidence to support the assumption that parents with higher SES were more involved in their

children's education. They also found that parents from ethnic minority groups were less participatory in their children's schooling. They did find that of the four constructs, home discussions were the most strongly related to academic achievement. As a result, they recommended that in order to promote parental involvement tied to student achievement, that schools give parents concrete information about parenting styles, teaching methods and school curriculum. Interestingly, they discovered that SES might have played a role in a context beyond the family – that is, students scored higher in math and reading if they attended a school that itself had a high SES score. This suggested that regardless of the child's own family background; the school's SES background might have played a role in getting more parents involved.

Baumrind's (1971) research on parenting styles has also been influential in parental involvement studies wishing to understand the effects of involvement on student achievement. From an observational study she conducted with 146 white families of preschoolers she discerned a typology of three parenting styles – authoritative, authoritarian and permissive – which she concluded had consequences for the development of cognitive and social competence in younger children. She found that authoritative parenting styles were more effective than authoritarian or permissive parenting styles in producing more positive outcomes in young children. The parenting styles reflected the values, beliefs and standards that parents set and expected for their children. An authoritative parenting style typified a style of parenting that was well balanced, moderately demanding, flexible and responsive to a child's needs without being overly indulgent or overly strict. One of the obvious limitations of the study was

the lack of participant diversity, suggesting that perhaps the generalized categories might only be attributable to non-ethnic families.

Baumrind's (1971) typology served as the framework for research conducted by Dornbusch, Ritter, Leiderman, Roberts and Faraleigh (1987) and their work with high school aged students. To discover how parenting styles impacted the academic outcomes of older students, they conducted research with 7,836 high school aged students who represented a diverse ethnic group. They found that both authoritarian and permissive parenting styles were negatively associated with student grades, while authoritative parenting styles were associated with positive student grades. This was true across each of the ethnic groups studies, except for within Hispanic male students, where authoritarian parenting styles were associated with higher grades. While their study provided interesting fodder concerning parenting styles as they were linked to student grades there were some red flags that warned against generalizing these findings. For instance, the data they captured relied upon student self-reported grades. Additionally, the data required students to describe their own perceptions of their parents' parenting styles and did not account for the relationships, either positive or negative, between these students and their parents. Finally, they applied Baumrind's (1971) typology, which was developed using data from white, middle class families, to an ethnically diverse population. As a result, there could have been certain cultural nuisances, which might have gone undetected because of White-influenced parental rating scale presented to these ethnically diverse students.

Zellman and Waterman (1998) corroborated Dornbusch, et al's (1987) research that parenting style was an important construct concerning student educational outcomes.

Ultimately, they found that helping parents to improve their parenting skills would serve students better than helping parents to be more involved at school. They conducted a quantitative study of 153 elementary-age students and their mothers who were from ethnically diverse backgrounds. They discovered that what parents *did* mattered in predicting child academic outcomes more so than how much they were involved at the child's school. They concluded that "positive" parenting style was the only parenting style that was significantly linked to student academic outcomes. However, because the researchers did not define the term "positive parenting style" it could be difficult to compare their findings against others which used more accepted terms, such as those from Baumrind's typology.

Notably, they found that a mother was more likely to be involved in a child's homework when that child needed more help as represented by his IQ. This concept – a child's need – arises in studies concerning home schooling and cyber school parents and will be discussed later in this study.

In a meta-analysis of 25 empirical studies on parental involvement and student academic achievement Fan and Chen (2001) found that parenting styles were not as important in predicting student educational outcomes compared to parental expectations of their children's academic performance. There were 92 correlation coefficients collected from the 25 studies. One of the difficulties they faced in their analysis was that the studies used different descriptions of parental involvement and some of the studies measured achievement in subject matter areas, while others measured more generally using GPA. However, overall they found a "medium" effect (based on social sciences measures) size of $r=.25$ that parental involvement did have a positive influence on student

academic achievement, when measuring achievement in general terms, such as GPA. Additionally, they discovered that parental supervision at home had a weak relationship to student academic outcomes, negating in part a correlation between parenting styles and student grades. Yet, they did find that the *expectations* set by parents of their child's academic performance did reveal a strong relationship to student academic grades ($r=.40$).

A similar discovery was made in a meta analysis of 1,000 studies on parental involvement conducted by Jeynes (2010), in which he also concluded that parental expectations represented a strong link to student educational outcomes. Referring to Baumrind's typology of parenting styles, he concluded that effective parental expectations were not authoritarian in nature – that is they did not explicitly command a student to perform well. Rather, he found that these expectations were subtle and tied to a general family understanding of strong work ethics and a positive outlook towards the future.

Not all have agreed that parental involvement played such an important role in student educational outcomes. Desforges and Abouchaar (2003) comprehensive review of the literature on parental involvement and its effects on student achievement cautioned that there were many factors, in addition to parental involvement, that influence student achievement. Additionally, in a meta-analysis of 41 studies on parental involvement Mattingley, Prislin, McKenzie, Rodriguez, and Kayzar (2002) found “little empirical support for the widespread claim that parental involvement programmes are an effective means of improving student achievement or changing parent, teacher and student behaviour” (p.549). However, it should be noted that this study was concerned with the

effectiveness of parental involvement programs implemented by schools, and did not consider actual parental involvement activities at home, which was a focus of many of the studies in this chapter.

Overall, research on parental involvement in their children's education presents a diverse collection of behaviors. It has found that overt actions, such as parents getting involved in school activities, to more subtle actions, such as parents offering a child encouragement or communicating expectations, could influence student educational outcomes. These concepts are still powerful today as schools do what they can to reach out to parents and to involve them in their children's education. There still seems to be a general consensus that overall, parental involvement can represent a positive force in student academic achievement.

What is yet to be discussed is a focus on the actual behaviors found when parents get involved in their children's schooling. As such it is appropriate to turn to the research of Hoover-Dempsey and Sandler (1995) who focused their attention on the parents themselves to discover their psychological motivations that contributed to parental involvement and the mechanisms, or behaviors, of their involvement.

HDS Model of Parental Involvement

The Hoover-Dempsey & Sandler's theoretical model called the Model of Parental Involvement provided a framework for examining predictors of parental involvement as a result of psychological factors (Hoover-Dempsey & Sandler, 1995; 1997; Hoover-Dempsey, et al., 2005a; 2005b). The HDS model focused on three issues concerning parental involvement: (a) why parents become involved in their children's education, (b)

how parents involve themselves and (c) why parental involvement has a positive influence on student educational outcomes. Hoover-Dempsey and Sandler were interested in constructing a model that was representative of the individual's perspective. By grounding their model in psychology, they chose to provide research that could produce outcomes reflecting the parent's perspective and that could address the parent's beliefs about their roles relating to their child's education. They acknowledged the validity of other factors that may play a role in a parent's decision to become involved, such as socio-economic status. However, they contended that these types of factors did not effectively explain *why* parents become involved, *how* they become involved or the *effects* of their involvement on student educational outcomes.

This model will serve as part of the foundational framework guiding the focus of this study. It will be referred to as the HDS model.

For over a decade the researchers conducted empirical research to study the reliability and viability of their theoretical model. The HDS model was eventually revised to focus on parental beliefs and to develop more relevant scales to measure parental involvement and its effects on student achievement (Walker, Wilkins., Dallaire, Sandler, & Hoover-Dempsey, 2005). The revised scales provided the foundation for quantitative studies which they used to measure the frequency of patterned responses from parents (Hoover-Dempsey, et al., 2005a; 2005b; Walker, et al., 2005).

The current HDS Model of Parental Involvement is depicted in Figure 4. It has five levels:

Level 1 suggests that there are three reasons *why* parents become involved in their child's education. These reasons include (a) personal motives, including

parental role construction and self-efficacy; (b) perceived invitations for participation from the school, the child and the child's teacher, and (c) life context issues such as whether parents have the time, knowledge and skills to help their child.

Level 2 describes that once parents have decided to become involved, their involvement manifests in four *behaviors*, including: encouragement, modeling, reinforcement and instruction.

Level 3 is concerned with the child's perception of their parent's involvement and includes each of the four involvement mechanisms described in Level 2.

Level 4 focuses on those attributes which are associated with student learning, such as the child's academic self-efficacy, intrinsic motivation to learn, self-regulatory strategy, and social self-efficacy.

Level 5 concerns the results, or outcomes, of parental involvement such as student academic achievement variables.

Figure 4 is a diagram of the model. It shows how the tiered levels contribute to one another, moving up from Level 1 to Level 5.

Level 5

Student Achievement



Level 4

Student Attributes Conducive to Achievement			
Academic Self-Efficacy	Intrinsic Motivation to Learn	Self-Regulatory Strategy Use	Social Self-Efficacy Teachers



Level 3

Mediated by Child Perception of Parent Mechanisms			
Encouragement	Modeling	Reinforcement	Instruction



Level 2

Parent Mechanisms of Involvement			
Encouragement	Modeling	Reinforcement	Instruction



Parent Involvement Forms			
Values, goals, etc.	Home Involvement	School Communication	School Involvement



Level 1

Personal Motivation		Invitations			Life Context		
Parental Role Construction	Parental Efficacy	General School Invitations	Specific School Invitations	Specific Child Invitations	Knowledge and Skills	Time and Energy	Family Culture

Figure 4. Hoover-Dempsey and Sandler Model of Parental Involvement. Illustrates the five levels of parental involvement described in the HDS Model. Adapted from Hoover-Dempsey and Sandler Model of Parental Involvement (2005a; 2005b).

The HDS model has been continuously evaluated for its ability to predict parent involvement and its effects on student achievement (Green & Walker, 2007; Hoover-Dempsey, et al., 2005a; 2005b; Walker, et al., 2005). In the early 2000s, Hoover-Dempsey and Sandler founded The Family-School Partnership Lab and embarked on a three-year study to empirically measure the model to answer three major questions: (a) why do parents become involved in their children's education? (b) what student achievement-related outcomes are influenced by parental involvement? And (c) what causes parental involvement activities to influence these student achievement outcomes? The project involved a series of four consecutive studies. Each study examined one of the three questions and the fourth study contained the final analysis and report of their findings. The fourth study was conducted in 2003 and included participants from five elementary schools and four middle schools. There were 358 participants who were parents of students in grades 4-6 and, the 358 students of the parents. The goal of Study 4 was to determine how well the full theoretical model of parental involvement worked. Parents and students were issued questionnaires concerning the revised scales. The researchers then compared the responses to the questionnaires with student achievement from the previous year's standardized achievement test data for participating students.

This fourth study is especially relevant to this research project because it showed that when combined, the HDS Model could successfully produced reliable measures for assessing Levels 1 to 4 of the constructs contained in the HDS model. Specifically, and of particular interest for this study, are the constructs of Level 2.

Results showed that Level 2 constructs (i.e. involvement behaviors) demonstrated that modestly positive levels were related to student proximal academic outcomes of

academic self-efficacy (modeling, $r = .20$, $p < .01$; reinforcement, $r = .17$, $p < .01$; instruction, $r = .17$, $p < .01$). They were also related to student self-regulatory strategy use (modeling, $r = .12$, $p < .05$; instruction, $r = .14$, $p < .01$) and to intrinsic motivation (instruction, $r = .13$, $p < .05$). Overall, parental reports of *instruction* reflected the strongest relationships between involvement mechanisms and student proximal academic outcomes. While these findings were only modest, they did suggest that some parental involvement behaviors might influence student academic outcomes.

Of particular relevance to this study is that when the researchers compared students scores from a test called the Tennessee Comprehensive Assessment Program (TCAP) taken in the previous year with a survey issued to parents in the following year concerning parental reports of involvement they discovered that students who showed lower TCAP tests scores had higher incidents of parents reporting that they provided more instruction to students in the year following the test. This theme – that a child’s needs influences a parent’s involvement in his education – plays out in several other studies to be discussed later in this chapter.

This study focused on Level 2, the mechanisms of behavior. They served as part of the framework for capturing and analyzing data relating to how learning coaches supported their students enrolled in a cyber charter school. Level 1 constructs, the psychological motivations for parental involvement, played a small role in understanding the beliefs of the learning coaches and will be added as part of the discussion concerning the overall framework.

For purposes of this study it was important to describe the terms used in the Level 2 constructs as they would be used to form part of the framework guiding this study:

The four mechanisms of behavior reflect how a parent encourages, instructs, models and reinforces a child's educational endeavors. The scales for the four mechanisms referred to in the HDS Model of Parental Involvement were based upon a study done by Martinez-Pons (1996). In his study, Martinez-Pons wanted to identify specific forms of parental behavior that affected student self-regulation of their own academic performance. His study included 105 elementary-aged students who assessed their perceptions of their parents' influence on their own academic self-regulation. From the data, he discovered that there were four constructs of parental involvement which supported student self-regulation. These included parental modeling, encouragement, facilitation and rewarding of the student's self-regulatory behaviors. While his study was based on social cognitive theory and focused on student perceptions, it provided a basis for understanding behaviors parents engaged which seemed to be linked to student academic achievement.

Hoover-Dempsey and Sandler adapted the scales developed by Martinez-Pons as the basis of their HDS model.

Encouragement is defined as the parent's explicit affective support for engaging their children in school or learning related activities. From Martinez-Pons, they evolved the scales used in their study to reflect that when a child is encouraged to persist at a task he will be more likely to succeed in school. The scales in the HDS model (2005b) focused on self-efficacy for learning and varied learning strategies, and include survey items such as, "We encourage this child when he or she has trouble doing school work" (p. 90).

Modeling is related to the learning students can derive from parents and is based in part on modeling theory, which suggests that students learn in part by observing models. Modeling is especially effective when undertaken by adults and particularly by a child's parents. The HDS scales include items developed to assess parental modeling as tied to student learning attributes and includes 10 items with statements such as "We show this child we know how to solve problems" (2005b, p. 92).

Parental Reinforcement includes behaviors that parents do to help develop and maintain student attributes associated with positive learning outcomes. It refers to the fundamental principle that behavior patterns occur and are maintained because of their consequences. It leans to reinforcement theory, which suggests that children will repeat behaviors when they consistently associate behaviors with receiving positive reinforcement. The HDS Model includes 13 items related to the student learning attributes, and is reflected in statements such as "We show this child we like it when he or she organizes his or her schoolwork" (2005b, p. 94).

Parental Instruction emerges in social interactions between the child and the parent during involvement activities as they engage in shared thinking that are related to learning strategies, processes, outcomes and as they engage in educational strategies. The HDS model includes 15 items, with statements such as "We teach this child how to ask questions when he or she doesn't understand something" (2005b, p. 96).

Two studies, which will be described in the following section of this chapter, applied these same scales in research involving parents and students in virtual schools. Black (2009) and Liu, et al. (2010), showed that parental *encouragement* could be important for students who are motivated by the immediacy of face-to-face interaction.

Parental *modeling*, they suggested, could play an important role in motivating students to be responsible for their learning and to persevere in an environment devoid of face-to-face interaction with a teacher. *Reinforcement*, they proposed, could help students establish good learning habits during online learning processes. Additionally, they recommended that parents could be important role models who inspire students to persist in an online environment. Finally, parental *instruction* they contended, could help students gain effective online learning strategies and this may be especially important for virtual schooling because of the lack of physical presence of teachers.

While the HDS Model holds promise for understanding parental involvement in traditional and virtual schools from a parents' perspective there are some problems associated with the depth, or lack there of, of the findings. Still unanswered are questions regarding the actual behaviors or activities parents engage in to help support their children's academic endeavors. For instance, while the quantitative measures used in the study were effective in reporting general statistical results, they seem almost superficial when trying to uncover the complexity and intimacy of parent-child interactions. This concern is validated when considering the survey instrument and the scales used to determine such multifarious behaviors. The survey instrument used in the studies included questions and response statements that left little room for understanding what was actually happening between a parent and child. For example, one statement concerning parental *role construction* asked parents to indicate how much they agreed or disagreed with the following statement: "I believe it is my responsibility to help my child with homework." When a respondent indicated, "agree" there is no description concerning what types of activities they might do to help with homework. To what extent

were they helping and how was it related to student academic achievement? In another measure of the construct *encouragement*, parents were given 13 statements for which they were to respond how true or false the statements that represented their own activities. Many of the statements seemed to be more about how parents advised their children, rather than how they how they interacted or encouraged their children. For instance, one statement read: “We encourage this child to follow teacher’s directions.” What type of interaction had taken place here? Was it only a verbal interaction? Was it based on a reward system? What had actually happened? This type of statement illustrated the one-dimensional nature of the survey used in the HDS model.

Perhaps another limitation was that the model did not account for the challenges parents may have faced as they supported their children’s educational endeavors. How might have these challenges affected the way they engaged with their children and what resources might they have turned to in order to overcome obstacles?

Furthermore, the HDS model did not attend to matters concerning child needs and its influence on parental involvement. This was shown by Zellman and Waterman (1998) as an important construct encouraging parental involvement. While the HDS Model did include a construct on perceived invitations for involvement, this did not reflect a comprehensive measure to capture how a child’s educational needs play a role in parental involvement. Interestingly, one of the by-products of their four-part study suggested that a child’s low test scores resulted in more parental instruction (Hoover-Dempsey, et al., 2005a; 2005b). It would seem that this relevant by-product should have made its way into the model, or at least initiated further study on motivations for parental involvement.

Another element missing from the HDS model was the relationship between the parental involvement behaviors and environmental factors, described by some researchers as an important construct promoting or discouraging a parent's involvement in her child's academic experiences (Lareau & Horvat, 1999). The HDS model's researchers acknowledged that they did not tend to SES elements or other environmental factors, such as the types of schools they studied or the students who attended these schools. These undiscovered territories leave room for further questions as to what it is that parents do to support their students and what factors influence their behaviors.

In a later study, Green and Walker (2007) conducted research with 853 parents of 1st to 6th grade students to examine the ability of the HDS model to predict levels of parental involvement. At this time, SES variables were included in their research. They found that even when SES variables were controlled for, the model was able to predict significant variance in parental involvement. Ultimately, they found that parental involvement was motivated primarily by social context, such as parents' relationships with the child and their teacher, rather than by SES.

The relevance the HDS models holds for this study was found in the framework because it provided categories for the types of behaviors parents engage in when they are involved in their children's education (Level 2 constructs). These constructs formed part of the conceptual framework as discussed later in this chapter (see Figure 1). They served as themes guiding data collection and analysis to better understand parental behaviors when their children are enrolled in cyber charter schools.

Parental Involvement in Home Schooling

In between the traditional and virtual school continuum is the home school environment and the home school parents who have fully engaged themselves as educational facilitators for their children. Because cyber charter schooling involves some elements that parallel the practices engaged in by home schooling parents it is relevant to consider this topic.

In general, home-schooled students have fared well academically when compared to their traditional school counterparts. For example, in a nationwide study including over 11,000 home schooled students, Ray (2010) found that students scored at the 65th to 80th percentile on standardized achievement tests, compared to the nationwide average scores of traditional school children which were at the 50th percentile. These findings were consistent with earlier research conducted by Rudner (1999) of 20,760 home school students. He found that home school students who took the Iowa Test of Basic Skills (ITBS) or the Test of Achievement Proficiency (TAP) exams scored between 70th and 80th percentile.

It has been recently reported that there are over 2 million home school students in the United States (Ray, 2011). However, this number may also include home school students who attend virtual schooling courses (Andrade, 2008).

Profiles of parents of home school their children show that most are non-Hispanic Whites, who are of middle class income levels (Ray, 2010; Rudner, 1999). Research has also found that these parents are typically college educated but they do not have professional teaching certificates (Bauman, 2001). This aspect alone confounds some who wonder how could non-teacher certified parents provide quality instruction that has

enabled home school children score so well on state and national tests. Ray (2010), has found through his research that one explanation could be the one-on-one attention home school children receive and the individualized instruction tailored to children's needs that helps them succeed.

Unlike the findings of parental involvement motivations described in the HDS model for the traditional school parent, research has suggested that home schooling parents were motivated by entirely different factors. Some research concerning home schooling parents has suggested that they were motivated to school their own children because of religious or moral convictions that were not tended to in public school settings, while other studies have suggested that they were motivated for academic purposes. Studies on home schooling parents have also concerned themselves with how home school parents instruct their children. Some have suggested that their religious practices play a role in their instructional practices, while others have suggested that a child's needs served as a guide for how parents provide instruction to their children.

There are a variety of reasons why parents choose to home school their children. Val Galen's (1988) research on home schooling parents was the first of its kind to categorize the motivations of home schooling parents into two identifiable groups based on ideology – religious motivations, and pedagogy – political motivations. Her study, drawn from interviews with 23 home schooling parents, concluded that parents could be categorized as either pedagogues or ideologues. Pedagogues were identified as parents motivated to school their children as a result in their belief that their children could learn better in the home environment and because they opposed the bureaucratic nature of

public schools. In particular, these pedagogists were not so concerned with the content being taught in school, but rather opposed the way it was being taught.

Ideologues were described as parents who are drawn to home schooling because it enabled them to teach their children religious doctrine, which was not found in public schooling. She discovered that this group tended towards more traditional styles of teaching, versus the more flexible and unstructured way of teaching, or unschooling, engaged in by pedagogists.

Van Galen's (1988) findings focused much attention on the historical perspectives of home schooling. According to Van Galen, the 1950s home school movement was dominated in a liberal movement where parents sought freedom from the rigid bureaucracies overseeing public schools. Later, in the 1960s, a religious movement took hold and parents who were frustrated by the lack of morals and the problems of separation and church sought refuge in home schooling their children. According to Van Galen (1988), these same parents were also influenced by the Coleman Report from 1966, which suggested that lack of parental involvement was linked to poor student academic performance. While certainly possible, this historical perspective may have limited Van Galen's ability to seek a more diverse, broader understanding of what additional environmental factors might have been occurring which could have influenced parental motivations.

Cai, Reeve and Robinson (2002) concurred with Van Galen's description of ideologues. Of interest is the literature review that they conducted as part of their study. They found that there were two paradoxical styles of home school – the controlling style and the autonomy-supportive style. The former style was described as one that was

parent-centered and parent-led and which sought to influence the way a child thought, felt and behaved. The latter style was described as tailor-made for the student, with flexible curriculum, the opportunity for autonomy-supportive, whereby the student moved through the curriculum on his own, and parents could lend a “spotlight-like focus on being aware of and meeting a wide range of students needs in a timely fashion” (p. 373). They suggested that in a home school setting the parent intimately knows the student’s interests and needs and can customize the learning each day. They hypothesized that religiously motivated home school parent-teachers would report a more controlling style of teaching. Because they could not find much literature concerning their premise they turned to studies concerning the conventional teachers which showed how conservative ideologies led some teachers toward adopting controlling styles of teaching. Their quantitative study included 71 home schooling parents who identified themselves as religious, 76 public school teachers and 76 college students from a local university’s college of education. They found that these religiously motivated home school parent-teachers did report a relatively more controlling style of teaching, whereas, data from the public school teachers and the teachers in training did not report a more controlling style of teaching.

Cai, et al.’s (2002) findings were limited in that they only considered religiously identified home school parents and did not involve non-religiously motivated parents to determine if it was religion or merely teaching style preferences that motivated the parents to adopt a more controlling style of teaching. However, their study is relevant to this study because it presents a dimension to consider regarding the ways, or styles, in which parents instruct their children.

Not all researchers agree that parents are motivated by religious or political views and some suggest that there is more to a parent's motivation than personal conviction. One study in particular found contrary to Van Galen (1988) and the findings of Cai, et al (2002). Bauman (2001) suggested that because the backgrounds of home schoolers were so diverse classifying or examining them as religiously or politically motivated was too simplified. His study, which included 24,829 cases of home school students between the ages of 6 to 17, showed that most families chose to home school because they believed that home education was better than public school education.

More recent studies on home schooling and parental motivations have concurred with Bauman (2001). Two studies in particular discovered that the *needs* of the home school child drove the motivations and teaching styles of home schooling parents (Higgins, 2008; McKeon, 2007).

In a pilot study of 76 home schooling parents, Higgins (2008) examined Van Galen's assertion that home schooling parents could be categorized into two distinctive groups: Pedagogues and Ideologues. Higgins (2008) discovered that parents in her study were motivated to home school their children because of the unique needs of their children rather than their association as pedagogist or ideologist.

Equally as important, she found a moderate and statistically significant association existed between parents who were motivated in part by their child's needs and the pedagogical methods they employed. She found that the majority of parents (58.8%) used traditional teaching methods if they had children who were identified as gifted or who had special needs. She described traditional teaching methods as parent-led with more structure than might be found in more liberal forms of home schooling styles.

As a result, Higgins (2008) concluded that parents were motivated to educate at home not simply for political or religious reasons, but for reasons unique to their family and they molded their teaching styles to accommodate their children's needs.

One of the major limitations of Higgins' (2008) study was the type of participants she included in her study: The sample of parents included a disproportionate number of parents who considered themselves as either non-religious or atheist. This narrow representation might have had a significant impact on the findings relating to parents' reasons for home schooling and the pedagogical methods they employed. Her study leaves open the question whether these pedagogical or ideological motivations do in fact impact teaching styles but, like the Cai, et al. (2002), it does give another reason to examine the ways in which parents instruct their children.

McKeon's (2007) findings also dispelled Van Galen's (1988) classifications. Her study concerned parent home schooling motivation, styles (practices) and teaching styles. In a robust, mixed-methods study of 682 home school parents, McKeon (2007) examined the influences of parent's choices in home schooling styles. First, like Higgins (2008) she discovered parents were shown to be motivated to home school for the academic possibilities and to meet their own family needs. This was because she determined that the majority of parents in her study were using a transformational approach to education. She described this approach as the convergence of pedagogical and ideological reasons to a more holistic motive for educating at home.

To understand the practices of home schooling parents, she delved into parent home schooling *styles* and *teaching styles*. McKeon (2007) described four types of home schooling styles: (a) Traditional, which was known as the boxed curriculum and is the

most common approach to home schooling; (b) Unschooling, which was a type of home schooling that focuses on the choices made by the child learner and that enabled a child to learn through natural life experiences, and is led by the child; (c) Eclectic, which was described as a relaxed form of schooling where parents may use a combination of boxed curriculum and homemade curriculum and where they operate along a continuum between traditional and unschooling styles; and (d) Classical, was known as a teaching model that seeks to tailor the subject matter to a child's cognitive development and emphasizes an evolution of thinking beginning with memorization of facts when the child was young to abstract thinking when the child reached high school age.

She discovered that most parents involved in her study, including both non-religiously motivated and religiously motivated, responded that they had an *eclectic style* of home schooling. However, she found that parents who indicated that they were Protestants or Catholics tended to employ a more traditional home school style than did non-religious parents. This finding corroborated Cai, et al's (2002) finding that religiously motivated parents employed a more controlling style of teaching.

Concerned with home school *teaching styles*, she found that a parent's home schooling style, not her motivations for home schooling, had a significant impact on her teaching style. McKeon's (2007) research attempted to dig deeper to understand the influences concerning parent teaching styles. To engage in this part of her study, she referenced teaching styles drawn from Shaw's (1995) explanation of teaching practices based on teaching philosophies and which defined four types of teaching styles: (a) Formal/Authoritative, which involved a teacher-centered approach where the teacher was responsible for providing and controlling the flow of content and the student was

expected to receive content, (b) Demonstration, which was also a teacher-centered approach but where the teacher demonstrated and modeled work and helped students to develop and apply learned skills, (c) Facilitation, which was described as a student-centered approach with an emphasis placed on the student engaging in activities to learn and where there was a great deal of responsibility placed on the student to take initiative, and (d) Delegation, which was defined as an approach that was also student-centered but the teacher was not an authority or a mentor but rather was merely a resource for the learner and where the learning comes from the learner.

McKeon's (2007) quantitative data revealed that parents who practiced unschooling were found to engage in a teaching style referred to as *facilitative*. On the other hand, the majority of parents who practiced a traditional style of home schooling engaged in what McKeon described as a *formal/authoritative* style of teaching.

Confounding the results from her quantitative data, were the results from qualitative data McKeon (2007) collected. This data showed that some parents' teaching styles were influenced more by the *needs* of their children than by their home schooling practices. For example, one parent described that she kept things very structured – authoritative approach – because she had one student who was autistic and three who were described as gifted and a younger student. Other parents described using more structured type reading curriculum because it suited the learning styles of their children and their teaching styles reflected a more authoritative approach to teaching. These qualitative findings did not support data from the quantitative portion of her study and revealed how difficult it might be to pinpoint the motivations driving parent teaching styles. However, they do revisit a theme now described in several other studies

previously discussed in this chapter, which suggested that a child's needs was an important factor in parental involvement (Cai, et al., 2002; Higgins, 2008; Hoover-Dempsey & Sandler, 2005a; McKeon, 2007; Zellmen & Waterman, 1998).

The strength of McKeon's (2007) study was the mixed methods approach she employed. It enabled her to see deeper than what was found in just numbers. On the other hand, one of the weaknesses of her study was that she did not describe how the home schooling curriculum used by participants might have influenced a parent's home schooling style or her teaching style, or even her motivations for home schooling. For instance, some curriculum, like K12, Inc, can be quite prescriptive, defined and structured. How might choice of curriculum have affected the way a parent construed her teaching style or home schooling practices? This seems to be especially relevant given the fact that the majority of parents reported that they were motivated to home school for academic purposes. Which academic materials were they using? What was the format of those materials? What type of training did parents receive, if any at all, which may have influenced their home schooling or teaching style practices? To contribute to a more holistic understanding of the home schooling experience, it seems worth considering these variables.

Still other studies have concerned home school parent teaching styles, and have revealed that the diverse findings realized in these studies has indicated that predicting parent teaching styles is not an exact science. For example, Huber's (2003) study found that home school teaching practices could be placed on a continuum where one end of the spectrum is a "schooled at home" approach that is very teacher-led or authoritative, while the other end of the spectrum was learner structured and learner driven. In another study

conducted by Davenport (2001) it was found that most home schooling parents employed direct tutorial instruction or had students engage in individual work activities.

Interestingly, Davenport (2001) also discovered that most of the parents included in the study said that they used the instructional method that they were exposed to in their own educational experiences. A study of home schooling parents conducted by Clements (2002) revealed that parents tended to choose their instructional techniques based on the amount of time they planned to engage in direct instruction. Respondents also reported that they engaged in direct instruction based on the needs of their children.

In general, studies such as those discussed here, have suggested that parent motivations to school their children at home, while a moving target, seems to be influenced in part by their own children's educational needs. Further, that parent home schooling styles, as well as their teaching styles, are dimensions of parental involvement worth considering as they might open a window for discovering more deeply the ways in which parents support their children's academic endeavors.

Parental Support of Students in Cyber Schooling

To date, there has been little exploration of the role that parents play in children's cyber schooling. From one of the earliest reports on K-12 virtual schooling (Clark, 2001) to one of the most recent reports on the status of K-12 online learning (Glass & Welner, 2011) parental roles have not made it into the discussion despite the probability that most younger students who enroll in virtual schooling must have at least one parent or guardian who has facilitated their schooling.

Watson, et al's (2011) *Keeping the Pace*, is an annual report on the policy and practice of online learning in K-12. In the most recent report, the only mention of parental involvement occurred in commentary about accountability and a discussion on their roles are discussed only briefly to describe how they log student attendance, enroll students, and attend parent-teacher conferences.

In an article that described the players involved in virtual schooling and their roles, Davis and Neiderhauser (2007) acknowledged very minimally the role of parents. They stated that the virtual school site facilitator must work with the student's parents "who may support distance learning at home" (p. 14).

Some articles and literature from EMOs have offered descriptions of their roles, describing their duties as varied, and ranging from administrative-type tasks to providing instruction and motivating their students. For example, learning coaches are expected to track and monitor their students' academic progress and attendance, which is typically recorded using an online learning management system (Bogden, 2003; Huerta, et al., 2006). Since parents are the eyes and ears of the school, they tend to communicate frequently with their children's teachers (Ash, 2010). They are also in charge of implementing their children's education plan and they may provide instructional support to their students when necessary (Butler, 2010; Revenaugh, 2005; Vergari, 2009). Litke (1998) referred to them as the first line of assistance, meaning that they were first on the scene to help out students as needed. These parents may also engage in training, provided by third party vendors or the schools, to enhance their own skills (Hasler-Waters & Leong, 2010). Additionally, they are the on site motivator, helping students to get through content and encouraging them to stay on task (Ahn, 2011, Revenaugh, 2005).

Describing her role as the principal of a cyber charter school, Frey (2005) revealed the important partnership role that played out between her school, its teachers and the parents of students enrolled in the school. She described that the whole family might be involved with the education of the child and that while usually one parent was designated as the child's primary learning coach, "Oftentimes, another family member takes part in teaching the child" (p. 2). She also stated that parents were heavily involved in her school because they were the key to understanding the student's learning styles.

Literature has suggested that parents who take on the role of learning coach for their children must commit significant time to their role. Davis (2011) cautioned that full time virtual education is not an option for all students because of the large commitment parents must make to work side-by-side with the children, typically amounting to 20+ hours per week. This may moderate the growth of this type of schooling, which Horn and Staker (2011) predicted would only grow to 10% of the total student population in the U.S. because of the time commitment required from parents.

Klein's (2006) study on 146 parents involved in four cyber charter schools painted a portrait of learning coaches. She found that they were demographically close to their home school parent counterparts. For example, most parents in her study reported that they were White, Protestant, married women, of middle income and between the ages of 40 to 49, college educated and had four or more children. The majority also reported that they were motivated to enroll their children in the cyber charter schools in order to provide increased academic opportunities for their children and to have access to free learning tools and resources. Overall, parent respondents reported being pleased with their cyber charter school experiences, including how their children were progressing

academically. They also perceived the quality of the curriculum as high, although some indicated that they wanted more opportunities for their children to socialize and that they wanted more choice of curriculum.

While this description of learning coaches provides a portrait, there is still little known about what they actually do to support their children or how they do it (Black, 2009). They do not fit the description of a home school parent because they are not completely in control of their children's learning or the curriculum and are obligated to meet public school standards (Ray, 2004). They also do not fit the definition of a teaching aide (Gerber & Finn, 2001) or a paraprofessional, as has been described in some of the more recent literature (Horn & Staker, 2011) because, while they assist with the children's learning, they are not employed by the schools. They also differ from soft skill teaching professions, such as mediating teachers (Barbour & Mulcahy, 2004), in that they serve only their children and are not considered part of school staff.

While there are limited empirical studies concerning the role of parents in virtual schooling, a few research studies have provided some focus on their roles. Some have tackled the significant role parents play for their e-learning students, while other have tried to discern whether or not their involvement could be linked to student academic achievement. Several studies have offered some insight into the roles, and quality of the roles, played out by parents of virtual school students.

One study conducted in England found that parental support of e-learning students was an important attribute that could contribute to student perseverance and success. Boulton, (2008) conducted a qualitative study 42 students, aged 14-16 who were enrolled in a 2-year course on Information and Communications Technology. Twenty of

the students involved in the study chose to take the course during an after school program, where they received support from a teacher and a technician and where they could work together. The other group of 22 students chose to take the e-course at home. Data were collected from interviews with the teachers, a technician, the headteacher and students; and classroom observations were also made. She found that the home study group was far less satisfied with the course. Only 28% of them ended up completing the course, compared with 80% completion by the after-school group. One of the problems cited by the home study group was lack of teacher and technician support, and importantly, lack of continued support from their parents during the course of study. Boulton concluded that the school should have provided not only an induction course for all the students and provided the teachers with strategies for working with e-learning students, but also should have also considered the role of the parents "...where they are going to take on the role of supporter for students using e-learning from home" (2008, p. 17).

Black's (2009) dissertation used the HDS Model of Parental Involvement to determine familial involvements' influence on student achievement in K-12 virtual schooling. He issued the HDS model survey to 453 parents and students enrolled in supplementary courses offered via a statewide virtual high school. By comparing student grades to survey responses he found that parental involvement was related to student achievement in virtual schools.

Of relevance to this study were the results Black (2009) found when he analyzed surveys from the group of participants which included responses from both students and their parents, and for which student grades were obtained (n=101). The data revealed a

significant relationship ($p = .03$) between the variables (the 4 HDS model behavior mechanisms) and student achievement where the regressed variables explained 9.4% of the variance in student achievement. And, more notably, two of the variables held significant prediction in student achievement. These were parental reinforcement and parental instruction: Parental reinforcement behaviors showed a positive relationship between a parent's perception that they praised their child for school activities and the child's academic achievement yet ($B = .58$), yet parent instruction behaviors showed a negative relationship between a parent's perception that they engaged in instructional activities with their child and the child's academic achievement ($B = -.61$). Black (2009) suggested this result could have occurred because it reflected students who struggled with the content received more instructional support from their parents. He contended that parents should be provided with better instruction on age appropriate interventions "aimed at improving the effectiveness of parent instruction and encouragement activities" (p. 129).

Black (2009) also discovered that students perceived that their parents had a much lower level of involvement than parents perceived of their involvement and that household income played a direct role in the amount of parental instruction as perceived by the student. This suggested a concern found similarly within the Zellman and Waterman (1998) study regarding the possible link between student-parent relations and survey outcomes. They addressed this as a limitation within their study and warned that without complete knowledge of student-parent relations it was difficult to generalize findings concerning parental involvement and its effects on student achievement.

Overall, Black's (2009) study provided evidence that family involvement and certain aspects of family demographics do play role in student achievement in supplemental virtual schools. He concluded that these outcomes gave cause for further research on methods for promoting student success in K-12 virtual schools.

One concern regarding Black's (2009) study relates to the type of virtual students included in his research. His study involved students who were taking virtual classes as supplements to their traditional school coursework. In other words, they were not full time virtual school students. This is important because it raises the question of whether parent and student respondents were able to differentiate parental involvement during traditional and virtual schooling time. It was not clear whether or not respondents adjusted their responses to account for the dual learning environments. It would seem that this fact could have important relevancy to the results in that these students were traditional school children first, and the virtual schooling component was only engaged in supplementary. Additionally, the HDS survey Black used relied on terms associated with traditional schooling, and did not necessarily include questions specific to virtual schooling.

Black (2009) recognized the weaknesses inherent in conducting a quantitative study when trying to understand complex belief and behavioral matters involving parents and their children. He recommended that future research consider qualitative methods in order to discern the process by which parents are participating in their child's virtual education. For example, he was especially interested in learning more about how parents successfully instructed their students and believed that any realized understanding could

help teachers and instructional designers to leverage parental support and to develop effective instructional materials and procedures for virtual schools.

In a subsequent study, Liu, et al., (2010) used the HDS Model survey's scales for measuring parental involvement mechanisms – the behaviors of involvement – with 938 virtual high school students and their parents. Even though the participants were only attending virtual school for supplementary purposes, the findings of their study are particularly useful for this study because they focused on the behavioral mechanisms of parental involvement in their children's education. They confirmed that the HDS model scales reliably measured the four involvement mechanism of parental involvement behavior, including encouragement, reinforcement, modeling and instruction. Additionally, they confirmed the importance of understanding actual behaviors of parental involvement in virtual schools and believed that the HDS Model could be used as a tool to help to “promote more research on the influence of parental involvement in online learning” (p. 121).

Most importantly, Liu, et al contended that the behaviors parents engaged in to support their part-time virtual school students might be linked to the types of activities that would support the skills necessary for younger students to succeed in virtual schools.

For example:

- Parental encouragement could help the student stay motivated and to persevere through longer in learning activities;
- Parental modeling could help the student to acquire good learning habits, such as being organized, self-motivated and responsible;

- Parental reinforcement could inspire the student to take on more responsibility for learning; and,
- Parental instruction could assist the student to attain effective learning strategies.

All of these practices were aligned to factors associated with successful online learning attributes (Cavanaugh, et al, 2004; Roblyer and Marshall, 2005). These factors will be discussed further in the following section on young learners.

In an early study on cyber schooling in Canada, Litke (1998) cautioned that parental involvement in the online environment was much more complex than in a classroom setting. In his study, parents were the primary line of assistance for their students working from home and public school teachers served as instructional facilitators. The full time cyber school was established to serve middle school students who could not or did not want to attend regular public school, who wanted a flexible school schedule or who elected to receive their schooling at home. Students accessed instruction through their home computers and parents provided assistance, while teachers were also on hand to offer instruction and guidance as needed.

Litke (1998) interviewed 12 teachers, 13 students and 7 parents to understand what the participants felt were the strengths and weaknesses of the school, and what factors they believed influenced student success in the virtual school environment. In general, respondents reported that the strength of the school lie in its flexible schooling, which could be engaged in from home. They identified several weaknesses of the school, such as the limited opportunities for student socialization, as well as some organizational issues. Notably, Litke (1998) reported that parents might not have been completely aware

of the commitment required on their behalf to help their students in this type of alternative schooling. For example, some of the weaknesses reported by the participants exposed the complexity of parental roles in a cyber school, such as when some parents reported that assuming the role as first-in-line of assistance for their children proved to be more time-consuming than they had expected. Many parents found that they had to instruct their own children and this they believed was the role of the public school teacher assigned to their student. Parents also had high expectations of teachers to make frequent contact with their children and to give them prompt feedback or responses. Furthermore, parents expected that teachers would maintain positive relations with their children. These expectations revealed that perhaps parents were not fully aware of the demand or responsibilities placed upon them.

Of the data most relevant to this study arising from Litke's (1998) research were the themes emerging on the types, or quality, of parental involvement. This data was collected from the students who described how they perceived that their parents were involved in their cyber schooling. Three themes emerged as a result of their responses, and included parental involvement as: (a) Absentee parent, (b) Supportive parent, and (c) Participatory parent.

Absentee parents were described as less involved in their children's schooling. Less than a third of the students described their parents as Absentee. Interestingly, each of the students who described their parents as absentee was from single-parent households. In these cases, the parent worked outside the home and so students were often left to work on school on their own.

Supportive parents were described by students as parents who ensured that the students fulfilled their school-related responsibilities. Parents did this by asking students questions regarding their progress, speaking with their teachers or providing tutorial assistance to their students. Over half the students described their parents as Supportive parents.

Participatory parents were described by students as influential of their schooling because they were involved in many aspects of the students' cyber schooling. For instance, these parents were reported by students as providing them with frequent tutoring, helping them with editing and checking assignments with them, and providing them with supervision. Less than a third of the parents were categorized by students as Participatory parents.

Additionally, Litke (1998) found that parental involvement increased when the students experienced difficulties. This corroborated among others, the Zellman and Waterman (1998) study in which they found that parental involvement increased when their student had difficulties with schoolwork.

Interestingly, when comparing student grades to how they reported the involvement of their parents, Litke (1998) found that student academic achievement was higher when students reported that their parents were supportive or participatory. However, he issued a caveat: Success was not guaranteed in any category of parental involvement and that much of student success in the cyber school could be attributed to their acceptance of the students' responsibility for their education, a characteristic found by Blomeyer (2002) and Cavanaugh, et al. (2004) as essential for successfully learning online.

While Litke's (1998) study provided a good foundation for considering some aspects of parental roles and the type or quality of parental involvement in cyber schooling, it was not necessarily generalizable. For example, not much was known about the students themselves. Were students who described their parents as Absentee struggling students who needed more parental support than say students who described their parents as Participatory? Furthermore, as in Black's (2009) study, relationships between students and parents were not revealed. There could have been a number of factors that led students to describe their parents' involvement and without some background on the relationship between the students and their parents much of what was learned might only serve as surface-level descriptions.

On the other hand, Litke's (1998) three types of parental involvement offer a unique way of exploring the depth of type of parental involvement: They raise questions regarding the quality of parental involvement as a construct important for understanding the complexity of parent roles in cyber schooling. Additionally, his study could serve as a foundation for exploring in-depth the unique relationship between the quality of parental involvement and student educational outcomes and how student needs might influence the level of parental involvement.

Combined, the lessons gathered from the three studies on virtual school students and parental involvement suggested that the attributes of parental involvement when their children attend virtual schools might play a more important role in this setting because the teacher was not always present. The way in which a parent stepped in to provide added assistance to the student seems to have been a factor related to student educational outcomes.

Some recent studies have focused on cyber charter schools and have provided insight concerning parent roles in these schools. For instance, in a comprehensive study on cyber charter schools, Klein (2006) provided a descriptive study of four cyber charter schools located in California and included an overview of the parents involved as learning coaches within these schools. She conducted a mixed-methods study with 146 parents whose children were enrolled in a cyber charter school system in California referred to as the California Virtual Charter Schools, or CAVA. Twenty-seven parents from the sample also participated in interviews. Additionally, Klein (2006) reviewed documents from the schools, including the school charters and websites to provide a more holistic description of these schools.

In addition to demographic findings, which suggested that these parents profiled similar to home school parents, she also learned about their motivations for enrolling their children in the cyber charter schools, the opinions they held of the CAVA schools and provided a glance at the roles these parents engaged in as learning coaches for their children.

The results received from the quantitative portion of Klein's (2006) study revealed that parents enrolled their students in the cyber charter schools for many of the same reasons as home school parents chose to educate their children at home. For example, parents reported that they enrolled their students in the cyber charters because of negative experiences they had with traditional schools and peer pressure their children experienced. These findings were similar to a study conducted by Erb (2004), in which she discovered that parents were "pushed" out of traditional schools because of bullying

and other problems they encountered. Some also cited that their children's academic needs were not met in the public school system, while others suggested that family values motivated them to enroll their students in the CAVA schools.

However, her study revealed that unlike their home school counterparts, there were a number of reasons unique to the cyber charter schools which motivated these parents to enroll their students. For example, some parents responded that they were motivated to enroll their children in the cyber charters because of the high quality, pre-packaged, ready-to-use curriculum. They also reported that the accountability required of them by the schools was helpful and that there was good support provided to them by the schools and the teachers.

Most parents included in her study responded very favorably in their opinions about the cyber charter schools. For example, they regarded the schools as effective and reported that the schools provided high quality curriculum and offered supportive teacher-parent and teacher-student relationships. Parents were also pleased with the positive student outcomes realized at the schools and they believed that positive family relationships emerged as a result of the schooling practices.

To get a glimpse into what types of things the parents did as learning coaches, Klein collected data from 11 parents who completed a statement regarding the daily learning routines of virtual charter school students. This "day in the life" snapshot provided some clues as to the types of activities parents engaged in to support their children during their cyber charter schooling. She discovered that the parents (a) were on call to help their students as needed and instructed or guided them through their lessons, (b) managed their children's activities, such as making sure they did their chores and

completed their schoolwork, (c) organized the day's activities, (d) monitored and checked student work and performance, and (e) taught life lessons and values, such as for example by incorporating Christian readings, or helping children learn from everyday, hands-on activities like cooking. Some parents also reported that they infused supplemental materials or lessons and substituted some pre-packaged materials with their own choices, suggesting that perhaps they may also have engaged in developing lessons and providing remediation or enrichment for their children.

Klein (2006) also found that cyber charter parents “made good use of technology” (p. 116). Primarily, parents in these schools used technology to support their children's learning and to communicate with other CAVA parents, teachers, and administration. One quote included in Klein's (2007) study illustrated the use of technology within the school: “The computer is just a conduit to deliver lesson plans and an electronic textbook sometimes interactive programs, but it's by no means doing the teaching” (p. 103).

Klein's (2006) study was intended to give a broad overview of cyber charter schools. However, one of the study's shortcomings was that it seemed to only capture the positive perspectives arising from its participants. Perhaps, this was due in part to the research design, which did not ask respondents to elaborate on challenges they faced within this unique school environment. On the other hand, some parents used the space in the open-ended question section of the survey to comment on challenges they faced. For instance, parents who had children of differing ages and skills levels found it challenging at times to meet each of their needs. Additionally, some parents remarked that the schools could make improvements to communications, and others commented that the rigid scheduling of attendance and academic progress presented challenges. Some reported that

they wanted more opportunities for their children to socialize within the school environment, and others wanted more freedom of curricular choices.

Her overview provided a snapshot of parents involved in cyber charter schools. Although it did not include a deep review of parent behaviors and activities to be able to draw any meaningful conclusions about parental involvement in cyber charter schools, it did provide some guidance on what to look for from a more in-depth analysis of learning coaches in cyber charter schools.

As part of his dissertation, Borup (2012) conducted a quantitative study with 82 parents and their online-charter enrolled high-school students in order to better understand parent-student interactions. He concluded that students valued the interaction they had with their parents and found these interactions motivational. Unexpectedly, he discovered that students reported significantly higher amounts of parental interaction than parents did. Additionally, he found that the majority of parents had less than five-minutes per week interaction with the students' teachers and that about 40% of the parents reported having no interaction with their teachers at all. Finally, he learned that the large majority of parental interactions were not significantly linked to student course outcomes and most were negatively correlated. These findings corroborated Black's (2009) study in which he found a negative correlation between the level of parental instructional involvement and student performance. Like Black (2009) Borup (2012) reasoned that these negative correlations might have reflected the fact that parents could have increased their interaction when their students were struggling, a conclusion similar to the Zellman and Waterman (1998) study.

While Borup's (2012) study was limited because data were self-reported, it yielded relevant information concerning the important role parents play for students who are enrolled in online schools and calls further attention to the complexity of parent-student interactions in cyber schools and the impact on student learning.

In an attempt to better understand the roles of parents, teachers and administrators in cyber charter schools a qualitative study was conducted with a small group of 14 from a Hawai'i school (Hasler-Waters & Leong, 2010). The data from the study corroborated many of Klein's (2006) findings that parents engage in a range of activities to support their children. For example, learning coaches helped their children by organizing, motivating, guiding and managing them. These types of activities were also revealed in Klein's (2006) study. Learning coaches also exhibited behaviors linked to the research on parental involvement behaviors and student academic outcomes (Hoover-Dempsey, et al., 2005a; 2005b). For instance, participants reported that they helped to *motivate* their children by giving them tangible incentives or programs such as UBoost, an online program that enables students to play fun online games when they have achieved an assigned task. They also *encouraged* their children to persist through challenging schoolwork by talking to them and participants also found ways to *reinforce* their child's learning by using technology or relying on other resources to supplement student learning. Learning coaches were found working alongside their child to provide him guidance and *instruction* as needed and they helped support good learning behaviors by *modeling* and engaging their students in learning opportunities beyond the content, such as by taking them on field trips or engaging them in community service activities.

Learning coaches also reported that they had to practice negotiating their roles with the teachers because there were no clear guidelines suggesting what a learning coach was responsible for and what a teacher was responsible for. This proved challenging for some teachers who were interviewed for the study: Some felt that they were not valued by learning coaches, or that their hands were tied as to what they could expect of parents. Yet they were required meet state testing standards and to help students achieve academic requirements. This aspect reflected some of the findings that emerged from Litke's (1998) study in which he described that some teachers felt stressed because they were no longer in control of the student's learning.

One of the limitations of the pilot study was that it included a very small group of parents who were not necessarily representative of the entire group of learning coaches at the school. Also, because the study was an ethnographic study intended to capture the goings-on at the school, it did not deliberately capture data relevant to parent behaviors and so only limited amounts of details from the study were relevant to this current study.

Overall, these studies suggested that parental involvement in cyber charter schools seemed to reflect studies describing how parents supported their home school students (Cai, et al, 2002; Higgins, 2008; McKeon, 2007) and highlighted the important, yet complex, role parents play in the education of cyber students (Borup, 2012).

These parents also seemed to have behaved in ways to support their children that were similar to the types of parental involvement behaviors found in traditional and virtual school parents (Black, 2009; Hoover-Dempsey, et al., 2005a; 2005b; Lui, et al., 2010).

Table 2 presented below summarizes what the literature and research has thus far described about the role of parents who support their student in cyber schooling.

Table 2. What We Know About Parent Roles in Cyber Schooling

Parent Role	Description
Organizer	Plans daily schedule, lesson plans, activities; gathers/collects materials, etc.
Instructor (guide)	Provides one-on-one instruction; tutoring; shares educational experiences with students to help them learn and work through content; constructs knowledge with student
Motivator	Motivates student to progress and to work through problems
Manager	Keeps track of student progress; manages student's time/schedule; discipline; monitors student progress

The literature has provided a demographic profile of some the types of parents involved in cyber charter and an overview of their roles. What has yet to be discussed is the manner in which they provide support to their younger students.

Younger students learn differently than adults. They tend to require more support because they lack life experiences and have yet to acquire the type of skills necessary for learning independently. When a child has help from an adult and/or his peers, he has greater potential to learn beyond what he is capable of doing on his own. This reflects

Vygotsky's (1978) theory called the zone of proximal development (ZPD). The ZPD concerns the distance between the actual developmental level of a child as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers.

In online schooling, where the teacher and the student are separated by space and time, young learners may face greater challenges when learning and navigating the requirements of this independent learning environment. Moore (1973) explained that independent learning in distance education requires a learner who is willing to take responsibility for his own learning. The more distance between the learner and the teacher, the more independent and autonomous that learner must be in order to be successful. Young learners, however, may not be ready for such responsibilities.

Knowles (1980) described the differences between adult and young learners. Adult learners tend to be self-directed and have developed life experiences which they can draw upon as a frame of reference for learning and problem solving. They also have a need to learn for real life purposes. Whereas, young learners tend to be more dependent needing guidance and supervision and they lack the life experiences which could help them solve problems more readily. For them, education is expected as something that will eventually become useful and they are ready to learn what they are told to learn.

Cavanaugh, et al. (2004) suggested that younger students enrolled in virtual learning might not have the skills necessary to be successful in virtual schooling unless the teacher stepped in to provide extra support to help them develop skills typically would acquire in adulthood. To be successful in distance education the student needs to

be an autonomous and responsible learner who has a well developed internal locus of control in order to persevere in this setting (Cavanaugh, et al, 2004; Knowles, 1980; Moore, 1973; Roblyer & Davis, 2005).

However, when there is a lack of teacher presence, such as in the home learning environment, the role of adult supporter may fall to the parent. Russell (2004) was concerned that relying on parents, of whom not much was known about their teaching qualifications, could be problematic. Others have also lamented the fact cyber schools rely too heavily on parents, many of whom are not certified teachers and who may not be qualified to provide the type of support these students need (Ahn, 2011; Huerta & Gonzáles, 2004; McCluskey, 2002).

Corroborating these concerns was Litke's (1998) findings, in which he discovered that there might be a link between the type of quality of support a parent gave to his e-learning student and the student's academic achievement. In his study, students who reported that their parents were either Supportive or Participatory (hands-on) achieved better grades than students who reported their parents as absentee. While his study was small and not experimental, this finding could suggest that the quality of support a parent provided to his children who were learning in virtual environments could have been an important factor in student academic success.

Liu, et al, (2010) predicted that the behaviors parents engaged in to support their students could in fact boost a child's ability to acquire and practice those skills necessary to be successful in virtual learning environments. This, they claimed, included the student's ability to persevere, be organized, develop his internal locus of control, and acquire the technology and time management skills necessary for success. They

suggested for example that when parents encouraged their children they were helping them to persevere; when they modeled and reinforced good learning practices they were helping their children to gain organizational, responsibility and motivational skills; and when they instructed their children they helped them work through problems encountered with in the content and to practice good learning techniques.

A recent white paper and an article on online schooling in Colorado found that the high dropout rates were due in part to the lack of support students received at home and at school (Glass & Welner, 2011; Hubbard & Mitchell, 2011b). It was reported that over half of the 10,500 online students who were enrolled in state's ten largest online schools during the 2008/09 school year left within a year. One in eight online students dropped out of school permanently. In addition to a lack of support, students also reported that they had a difficult time staying motivated in the autonomous learning environment. Similarly, Boulton (2006) found that e-learning students who worked from home blamed the lack of support they received at home as part of the reason they were not able to complete the course.

Problem Statement

The physical presence afforded by the teachers and the classroom has critical impact on the development and shaping of the academic success factors (Harter, 1996). In the virtual learning environment, this could include those skills identified by Roblyer and Marshall (2003) such as self-control, technological skills, self-esteem, learning motivation, and time-management skills. Given the lack of physical presence of the teacher inherent to

online learning, it remains to be determined how to best provide the support to keep online learners focused on assigned tasks (Liu, et al., 2010, p. 108).

Furthermore, literature exploring cyber charter schools has often cited concerns arising from policy-makers, school leaders and the general public about how parents are used to support and provide instruction to their children (Ahn, 2011; Huerta, et al., 2006; McCluskey, 2002). They are concerned over the quality of support given by parents in these schools (Butler, 2010; Russell, 2004). Some also question the system of self reporting, which they say makes it difficult when authenticating students' work and in measuring program quality (Huerta, et al., 2006). Others have questioned whether parents are actually doing the work rather than the student (Bogden, 2003). Whereas, in traditional schools parental involvement is encouraged, in cyber charters it is questioned.

The uncertainty of the quality of support cyber charter students receive from parents suppicates deeper research.

Summary

This chapter has included a discussion on cyber charter schools, and an analysis of the research conducted on parental involvement in their students' education within traditional, home and virtual school settings, including cyber charter schools.

Cyber charters have grown out of a long history of distance education. They have continued to expand throughout the first decade of this century and are forecasted to grow exponentially. However, concerns over the effectiveness of this type of schooling and over the potential conflict of interest that exists between the public-private nature of some of these schools have yet to be resolved.

Some of the research discussed in this chapter has suggested that parental involvement in their children's traditional or virtual education has had a positive affect on student academic outcomes. Research on home schooling parents, including their motivations for home schooling and pedagogical methods used in K-12 home school settings, has facilitated an understanding of the types of activities engaged in by parents who assume the role as an educational facilitator for their children. Finally, research on parents involved in cyber charter schools has provided an overview of what is currently known about the roles and behaviors of parents/guardian who are learning coaches for their students enrolled in cyber charter schools. It has illustrated that parental involvement activities span a wide range and seem to be driven in part by their children's educational needs. These parents also seem to behave in ways to support their children that are similar to the types of parental involvement behaviors linked to student academic achievement as found in traditional and virtual school parents.

The next chapter will describe the type of research methods and the methodology that was conducted to answer the four research questions that formed the basis of this study. It will also describe the conceptual framework that served as the tool guiding the creation of data collection instruments and data collection methods, as well as how it facilitated analysis of the data. Finally, there is a discussion of the study's limitations and how validity and reliability were achieved.

CHAPTER 3: METHODOLOGY

Research has shown that parental involvement in their children's traditional school education has led to positive academic outcomes. The same has been found when parents of students enrolled in supplementary online learning involve themselves in their children's educational endeavors. However, very little research has been done concerning parental involvement for students who attend cyber charter schools. Furthermore, literature has suggested that the parents of cyber charter students are called upon to serve as important educational facilitators for their own children. Concerns have also been raised over the reliance on parents who are not certified teachers to serve in such capacity.

If uncertainty exists over the quality of support cyber charter students receive from parents than it is essential to develop a better understanding of these learning coaches.

The purpose of this exploratory case study was to explore the beliefs and behaviors of parents/guardians as they supported their children involved in cyber charter schools. As this was a phenomenon that has yet been fully explored, grounded theory was an appropriate methodological approach. The approach enables the researcher to rely on an inductive process for analyzing the data rather than adhering to a particular theory where the researcher must deduce the data into pre-established categories (Glaser & Strauss, 1967). Additionally, as I was not able to physically immerse myself in the field, grounded theory presented a viable option for observing phenomenon from a distance (Flick, 2009).

Data for this study were collected from a small group of parents and a guardian, who were learning coaches for their children enrolled in a cyber charter school. Data were gathered from interviews, focus groups, diary logs, an online survey and an examination of resources they used to support their students. This exploration was facilitated by research grounded in cyber charter schooling and parental involvement in their children's education. Furthermore, a conceptual framework based on the Ecological Systems Theory (Bronfenbrenner, 1986, 1994) provided the foundation for organizing, collecting and analyzing the data. An interpretivist lens served as the filter through which data was analyzed using methods suitable for a grounded theory study.

This chapter describes the methodology used for this study, and includes the research design, the role of the researcher, descriptions of the participants and the setting, data collection and analysis procedures, and the methods engaged in to validate the findings and reliability of this study, as well as the ethical measures employed to protect the rights of the participants involved in this study.

Research Questions

As a result of the limited research concerning cyber charter schools, little is known about the parents of students enrolled in cyber charter schools and the support these parents lend their children. However, the literature has described that they indeed play a vital role in the educational endeavors of their children (Ahn, 2011; McCluskey, 2002; Schaffhauser, 2012). Furthermore, research on parental involvement in traditional and virtual school has shown that parental involvement can have a positive effect on the educational outcomes of their children (Baumrind, 1971; Black, 2009; Dornbusch, et al.,

1987; Eccles & Harold, 1993; Epstein, 1986, 1995; Jeynes, 2010; Lareau, 2011; Lareau & Horvat, 1999; Sui-Chu & Willms, 1996; Zellman & Waterman, 1998). As this form of public schooling has continued to grow, so too have the concerns over its reliance on parents to serve as educators for their children and the suspicion that these parents may not have the credentials to act in such capacity.

One goal of this study was to contribute to the body of knowledge concerning parents of cyber charter school students and to offer general statements which might describe similarities or differences between the study findings and what is already known (Mayring, 2007).

The purpose of his study was to conduct an in depth exploration of a group of these cyber charter school parents in order to provide a better understanding of how they support their children. Four research questions were used to address this study:

RQ1: How do learning coaches support their students?

RQ2: How do they perceive their roles?

RQ3: How do they use technology to support their students?

RQ4: What challenges do they face?

Methodological Approach

While typically the grounded theorist sets out to generate theory, the approach can also include a process whereby the researcher tries to “elucidate concepts that may become part of the building blocks for a theory” (Patton, 2002, p. 127). Additionally, it is not necessary to develop a grand theory or a hypothesis, but can be equally as important to call attention to certain phenomenon which can contribute to the existing literature

Creswell, 2008). Furthermore, by using grounded theory a researcher can refine or extend preexisting theory (Lofland, Snow, Anderson, & Lofland, 2006).

One of the goals of grounded theory is to discover the main concerns of the participants and what they do to resolve these concerns. Often, during data analysis the researcher will need to ask (a) what is going on? and (b) what is the main challenge faced by the participants and how do they resolve it?

Using a grounded theory approach, I endeavored to explain what was going on from what I observed and to do so by capturing this from the perspective of the participant themselves.

Qualitative Study

Qualitative research is a form of scientific research that seeks to understand a phenomenon in depth from the perspective of the population it involves (Mack, Woodsong, MacQueen, Guest, & Namey, 2005). While its history dates to the late 1800s it only recently evolved in the field of educational research as a call by researchers for the need to examine phenomenon from the perspective of those being researched (Creswell, 2008). Unlike quantitative research, which seeks to provide unbiased, objective results of narrowly defined questions, qualitative research seeks to provide a more in-depth focus for a broadly defined inquiry. Qualitative research is a useful research strategy when one's aims are to develop a rich understanding of a particular group or setting (Merriam, 1998).

One of the benefits associated with a qualitative study is that it can help to illuminate results about a particular group which may be deemed credible because of the

in-depth detail given and the personal immediacy uncovered within the study (Maxwell, 2009). Its strength also lies in its ability to provide complex descriptions of participant experiences, behaviors, beliefs and relationships (Mack, et al., 2005). Qualitative studies result in rich descriptions that may either explain or explore given phenomenon. As such, a qualitative study was an appropriate fit for this research since the aim of this study was to provide a rich understanding of learning coaches.

Qualitative research is a naturalistic inquiry, meaning that it occurs in natural settings without contrived or controlled schemas (Patton, 2002). It is emergent and so its design should be loosely framed leaving room to unfold as inquiry evolves (Merriam, 1998). Here, the researcher must be open to adapting her inquiry as her understanding of the phenomenon deepens. She must be willing to discover new paths and new questions that may arise as a result of engaging with and learning from her participants. The design presented in this study is used to provide guidance for the researcher and given to provide confidence to the readers that this study can be carried out by the researcher.

There are of course concerns surrounding the nature of qualitative research. Stake (1995) reminded us that it is a subjective undertaking and that the lack of steadfast protocols or procedures can be detrimental to the researcher's interpretations. He lamented that it tends to add more "puzzles" than solutions. Merriam (1998) suggested that it can be a slow and tedious process and that there are ethical risks associated with any inquiry involving human subjects. However, when the goal of the researcher is to "seek understanding of human experience" (Stake, 2005, p. 38) and when a proper research design is employed, then qualitative research can be perfectly suited.

Goals

Maxwell (2009) reminds researchers that stating goals, and staying true to them is essential in conducting a qualitative study. For starters, goals help guide decisions and help to determine whether or not a study is indeed worth doing. He explained that there are three types of goals we must reconcile in order to drive our study forward with validity and towards unbiased research. These goals include personal, practical and intellectual goals. Personal goals for doing the study are essential in helping the researcher to let readers know what has motivated her to engage in a particular study. Practical goals concern the researcher's need to accomplish something, while intellectual goals are set because the researcher hopes to understand some phenomena in depth.

My personal goals for conducting this study included a genuine interest in helping children engaged in alternative schooling to have the best learning opportunities possible. My practical goals included a deep desire to help parents, who instruct their own children, to be informed of and have access to relevant and important support information relating to their engagement as learning coaches for their own children.

An interpretive approach to conducting a study can be one of the intellectual goals set forth to achieve a deeper understanding of a study's participants and how their own realities influence their behaviors. It is a research paradigm often associated with qualitative researchers who are not looking to prove or disprove participant accounts, but rather to explore the realities as perceived by participants (Maxwell, 2009). My intellectual goal was to make sure that I brought forth a voice not typically heard in educational circles and to make clear the opportunities for facilitating parents/guardians as they support their own children's educational journey.

Subjectivity Statement

An interpretivist paradigm is well suited for my own philosophical beliefs because I was interested in learning what participants perceived about their roles and what they perceived that they were doing to support their children who were enrolled in a cyber charter school.

In any study it is appropriate for the researcher to establish her foundational beliefs and potential biases (Creswell & Plano, 2011; Schram, 2006). Ultimately, I believe that the way we come to learn about the world or what we know is through our experiences with elements in our surroundings, including construction of perceptions that can be influenced by our family and our peers. Furthermore, I am a pragmatist at heart and I hope to distill what is learned in this study into what can eventually be used as practical information for the benefit of K-12 students. I am also a novice futurist interested in searching for alternative possibilities that may emerge over time to benefit our children.

It is also relevant to describe my background in order to establish a foundation for my interpretations and to surface any potential biases, which may have influenced my ascriptions. I am the mother of two elementary-age children who were enrolled in a cyber charter school where I was their learning coach. I also have 15 years of teaching adults and more recently K-8 learners. My experiences as a learning coach were far more instructive for me in that they gave me the opportunity to look closely at how we learn, progress and are motivated at an individual level. I believe in the value of one-on-one instruction and learning at one's own pace for I have seen first hand how powerful it can be. I weigh this comment against my belief in the power of learning with others, engaging in groups and the value of play, and thus I appreciate the benefits of traditional

schooling. Valuing both modes of schooling should help to temper my own biases towards emphasizing the benefits associated with cyber charter schools.

The challenges I faced teaching my own two children initiated my keen interest in understanding how parents support their children's learning. As such, my goal was to use an interpretive lens to give equal weight to all participant responses and to make sense of what was going on within their bounded system (Schram, 2006). I aimed to understand what they made of their realities and how their own interpretations might have influenced their behaviors and perceptions. My goal was to "tell what is" (Knupfer & McLellan, 1996, p. 1196) and to provide a description of these learning coaches from their own accounts.

Case Study Research

Case study research, which arises from the research tradition of ethnography, is an effective method for studying a group of individuals bound by a defined system (Stake, 2000). In this study, the bound system was the cyber charter school and the group, or unit of analysis in focus included learning coaches. Yin (2004) referred to case studies as a "comprehensive research strategy" and an empirical approach which involves an investigation of a particular phenomenon (p. 14). Most importantly, he explained that case studies could help to explain relationships that exist in real life situations that cannot readily be examined or may be too complex to examine through purely quantifiable measures.

One of the key features, and strengths, of a case study is its reliance on multiple data sources (Yin, 2004). The use of variety of sources helps the researcher to corroborate

findings from one source against those presented within other sources. Yin (1994) described six types of sources that are typically used in case studies. These sources include documents, archival records, interviews, observations, participant observations, and artifacts. The types of sources used in this study are described in detail in the section entitled “Data Collection.” They included intensive interviews, focus group interviews, diary logs, email correspondence and documents, such as resource materials and online websites and an online survey.

A case study is an effective method to use when the study will be conducted in a shortened time frame and it provides a plausible method for collecting data that does not rely on direct participant observation as typically engaged in during a traditional ethnography (Patton, 2002; Yin, 2004). Furthermore, because of the time and distance between my participants and myself, this approach provided a credible strategy for collecting relevant data that did not rely on direct participant observation (Patton, 2002).

Additionally, case studies lend themselves to the collection of both qualitative and quantitative data collection (Stake, 2000). While this study was not a mixed-methods study, it employed what is referred to as a multi-modal approach, that was the incorporation of quasi-statistics (Maxwell, 2009). This should have helped to give a better understanding of the research problem (Creswell, 2008). In this study, a survey was used to collect demographic details from each of the participants. The data collected using this instrument was used to provide a more descriptive vision of the participants. Qualitative data yielded a deeper understanding of participant experiences, behaviors and beliefs.

There are some concerns associated with case studies. For example, they can be difficult to generalize from because the participants involved may not be representative of an entire population (Flick, 2009; Merriam, 1998; Yin, 2004). Case studies exist to provide an “ideal type” or an account of a particular population and are therefore not prone to generalizations (Maxwell, 2009). Case studies can be costly too because the researcher, who is trying to provide a rich description of the problem must rely upon a wide variety of sources, some of which may add expense to the study (Merriam, 1998).

However, there are a number of valid reasons why the case study approach made most sense for this study. First of all, a case study is an effective method to use when the study will be conducted in a shorten time frame (Patton, 2002). Additionally, because this study was conducted over the Internet, this approach provided a plausible method for collecting relevant data that did not rely on direct participant observation (Patton, 2002). Finally, case studies lend themselves to the collection of both qualitative and quantitative data collection (Stake, 2000) which can “provide a better understanding of the research problem and questions than either method by itself” (Creswell, 2008, p. 552). This suits the multi-modal approach I employed, which was to collect qualitative data supported by quantitative data in order to facilitate a better understanding of the participants.

For this research, I proceeded with an exploratory case study approach. Yin (1994) described this approach as one which seeks to answer what, how, and why type questions. This type of study has also been referred to by Stake (1995) as an instrumental case study in which there is a particular need for developing an understanding about a group. This rationale gives the study direction and exists to guide the researcher’s inquiry. In this study, the purpose was to facilitate a better understanding of what learning

coaches do to support their cyber charter students, and how these coaches perceived their roles. Because there was relatively little research that existed on learning coaches in cyber charter schools, this investigation into a phenomenon not fully examined was further cause for an exploratory case study.

In the exploratory approach, the researcher begins by collecting data and uses the findings to inform the instruments and guides to be used over the course of the study. It is an iterative approach, meaning that while data is being collected, it is also being analyzed and each round informs the succeeding so that the study emerges and can reflect relevant new inquiries yielding a deeper understanding of participant experiences (Merriam, 1998; Stake, 1995; Yin, 2004). The quasi-statistics collected through a survey were used in order to assess the frequency of certain responses and to describe demographics of the participants in order to get a better understanding of those involved in this study. While these statistics did not play a primary role in this study, the use of quantitative data in a case study can be considered a pragmatic strategy and is used when the practical demands of the research problem are prioritized (Rocco, et al., 2003; Tashakkori & Teddlie, 2003).

Maxwell (2009) referred to the term quasi-statistics used in qualitative studies as the use of “simple numerical results that can be readily derived from the data” (p. 245) and which can facilitate a better understanding of the amount of evidence collected which leads to a particular inference or conclusion. He asserted that when researchers conclude that a particular phenomenon is “rare” or “typical,” they are implying a quantitative component and that by referring to quasi-statistics in the study the researcher has an opportunity to further establish validity. Additionally, and on occasion, prior research having used only one form of data collection and analysis will recommend gathering

quantitative and qualitative data for future studies. Two quantitative studies influencing the conceptual framework in this study have called upon future researchers to use qualitative data as well in order to collect “a more complete picture of belief-behavior links than the use of quantitative surveys alone” (Walker, et al., 2005, p. 100) and because the subject matter – parental involvement – is complex and quantitative methods alone may not capture the subtle nuances (Black, 2009). While the qualitative data collected in this study was given priority, quasi-statistics helped paint a more complete picture of the learning coaches included in this study (Flick, 2009).

Conceptual Framework

The HDS Model as well as literature reflecting parental involvement in virtual, cyber and home schools facilitated part of the research intentions of this study: They provided a framework to begin to understand what it might be that learning coaches do to support their children’s learning. However, these elements alone may not have captured the complete picture of learning coaches. To gain a more holistic view and to delve deeper into the beliefs and behaviors of learning coaches it was necessary to also consider the broader environmental factors surrounding and potentially influencing learning coaches. Bronfenbrenner’s (1986) Ecological Systems Theory served as a tool guiding a broader understanding of learning coaches. As I wanted to focus on the human elements concerning learning coaches, rather than the organizational elements in which they operate, the Ecological Systems Theory was an appropriate tool to use because of its direct focus on the person. Research described earlier within this study was layered

within the theory in order to develop a conceptual framework that served data collection and analysis.

Bronfenbrenner's (1986, 1994) theory calls upon researchers to look beyond the immediate surroundings and consider the micro and macro systems which influence behaviors and beliefs of a person. He contended that in order to fully understand human development it was necessary to consider the entire ecological system surrounding his growth. His theory of ecological systems includes five nested systems that influence human development.

The theory is based upon two propositions. The first suggests that human development takes place through interactions between the developing person and the other persons, objects and symbols in his or her immediate environment. This regular interaction with the immediate environment is referred to as proximal processes. These processes occur in the parent-child interactions, among others. Environmental contexts form the second proposition, which is defined as the form, power and content found within the environment surrounding the developing person. These may include things such as social class and characteristics. These two propositions form the basis for understanding the environment from the perspective of the developing person. Here, the ecological environment comprises five nested structures.

The first of the five nested structures is referred to as the Microsystem. It is pattern of activities, social roles, and interpersonal relations experienced by the developing person. It takes place in face-to-face settings. The second system, called the Mesosystem, comprises the links and processes taking place between two or more settings in which the developing persons engages. This might include the home and the school.

The third system is the Exosystem and it is made of the links and processes taking place between two or more settings one of which does not involve the developing person, but in which events may indirectly influence him. For instance, when a mother goes back to work after years of child rearing, the child could be affected by her absence. The fourth system is the Macrosystem and it comprises the overarching structures of the three previously discussed structures and is characteristic of a culture or even a subculture. The fifth system, referred to as the Chronosystem consists of not only the time during which development takes place, but also historical events, which mark or define a particular point in time or a generation, such as the Baby Boom Generation or Industrialization.

Bronfenbrenner's (1986, 1994) theory provided the incentive for me to look deeper at the learning coaches involved in this study and the environmental factors which may have influenced their support for their students. While this theory was not relied upon to establish links between influences and behaviors, it was leaned upon to help form an understanding of, and ultimately convey, a more holistic picture of the participants involved in this study. Like a photographer with a wide-angle lens, ecosystems theory facilitated capturing a broad picture of what was going on within the boundaries defined by this study.

Bronfenbrenner's (1986, 1994) Ecological Systems Theory provided the structure to the conceptual framework guiding this study. A conceptual framework is there to inform and guide a researcher's study. It also serves to guide assessment, to refine goals and to develop a relevant research design. Maxwell (2009) reminded researchers that a conceptual framework is a model that helps guide what the researcher plans to study and to discover what is going on with the things planned for study. At the same time, he

cautioned the researcher not to rely too heavily on a framework because it can be limiting, or can narrow the researcher's focus so much that she might be blinded to the subtlest findings, which may carry great significance for the study.

Keeping Maxwell's caveats in mind, I set out to create a framework that would provide me with a solid foundation encompassing aspects of the literature relevant to my study and that would allow me the flexibility to remain open-minded during data collection and analysis.

The conceptual framework shown in Figure 1 below represents the tool I used to study participants, to collect and analyze the data and which I used to triangulate and validate the findings. The mechanisms of involvement from the HDS Model of Parental Involvement were the centerpiece of the framework as they represented the research questions that were fundamental to this study. However, the framework also included a wide range of variables extending from the literature examined here on parental involvement within virtual, home and cyber charter schooling as elements of the five nested structures found in Bronfenbrenner's (1986, 1994) theory. These components helped reflect the environment in which the participants were located. The framework also called attention to look to other factors which might have helped shed light on the beliefs and behaviors participants engaged in to support their children enrolled in the cyber charter school.

Conceptual Framework Behaviors of Learning Coaches and Possible Influences

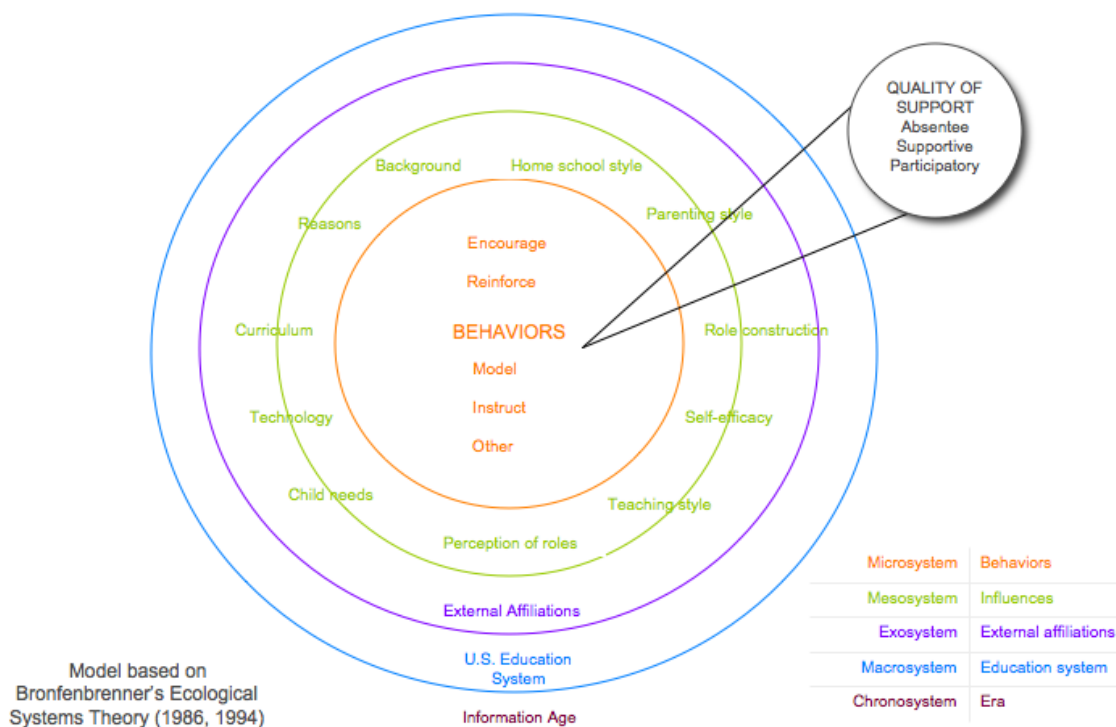


Figure 1. Conceptual Framework. Framework based on Bronfenbrenner (1986, 1994) Ecological Systems Theory as well as literature concerning parental involvement in children's education.

The large circle in the center of the diagram – the Microsystem – represents the four core mechanisms of parental involvement per the HDS model. There is also the term, “other” which represents additional behaviors the participants may have engaged in to support their students. These might have included behaviors discovered in previous studies of parents in cyber charter schools, such as parents managing and organizing

student schoolwork. These elements comprise the Microsystem because they reflect the direct interaction between the parent and the child.

The first ring proximate to the center of the circle comprises factors that could be found within the Mesosystem. These may have represented the influences on parental support and involvement. They included the parent's background and reasons for choosing to enroll their children in a cyber charter. They may also have included aspects such as the curriculum, technology, children's needs, teaching style, self-efficacy, and role construction, parenting style and home school style.

The second ring contains elements that might have been found in the Exosystem. These included external affiliations, such as social or religious or other groups in which the parent belonged to, and which may have indirectly influenced his interactions with his children.

The third ring comprises variables that might have been found within the Macrosystem. This includes the U.S. education system. Policies to reform and improve U.S. public schools, such as the No Child Left Behind Act (White House, 2001) and the Race to the Top (White House, 2010) are adding pressure to the already over-burdened, under-funded U.S. public school system. The cyber charter school represents one of many alternative schooling methods that have yet to be proven as a successful model of school reform.

The outer area of the diagram comprises the Chronosystem, which reflects the Information Age. The Information Age represents a shift from the industrial age to a new era characterized by the overriding significance of information and technology (Pink, 2005). It represents the chronological period in which this study took place and which

shaped the very nature of the educational environment in which this case was situated, i.e. the cyber charter school.

The circle extending from the center of the diagram represents the type or quality of support given by parents to their children. It includes the themes found in Litke's (1998) study, including the absentee, supportive and participatory parent.

The conceptual framework was used to guide this study and served as a tool for developing the data collection instruments and for analyzing the data. It was used primarily to address RQ1 How do learning coaches support their students? In this case, the framework helped address the question of support from a very broad perspective collected from the surrounding environment and narrowing to address more intimate questions arising from the parent's personal perspective and interactions between the parent-child, parent-teacher, parent-school, parent-parent.

RQ2 How do they perceive their roles? This question concerns what the participants believed about their roles in relation to their children's teacher roles. For example, did they believe that they were the primary educator for their children? Or, did they believe that the child's assigned teacher was in fact the primary educator? Did learning coaches believe that they were ultimately responsible for their children's academic outcomes or did they believe that was the responsibility of the assigned teacher? In addition to referring to the framework to address this question I also used the diagram shown below (Figure 5). It represented what learning coaches may have believed of their roles within the cyber charter school. It was used during interviews to help respondents indicate their beliefs about their roles as learning coaches.

Learning Coaches: Where do they fall? How do they perceive their roles?

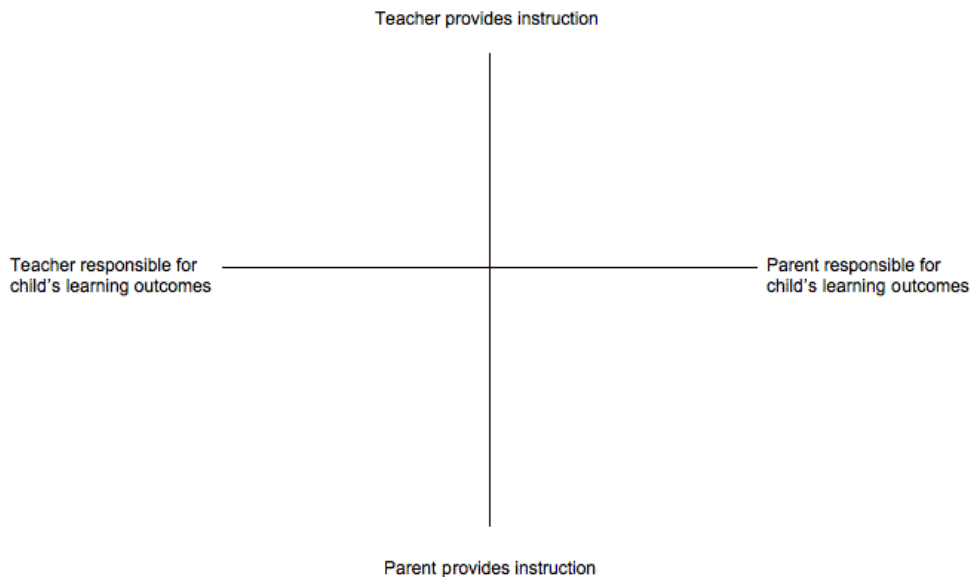


Figure 5. Graph Representing Roles of Learning Coaches. Diagram was shown to participants so that they could indicate where they believed they fell within the spectrum of roles between teacher and learning coach.

The framework was used in part to address RQ3 How do they use technology to support their students? The goal was to facilitate a better understanding of how parents used technology to support their children.

The framework served to address RQ4 What challenges do they face? The goal was to capture the types of challenges these learning coaches faced as they interacted with their children and as they sought support themselves.

The framework provided the basis for the development for a semi-structured interview guide, focus group interviews and diary log protocol and served efforts to code, analyze, triangulate and validate the data.

Data Collection

To respond to the research questions data was collected from multiple sources including, (a) intensive interviews, (b) focus group interviews, (c) diary logs, (d) resource materials used by learning coaches, and (e) a demographic survey. Interviews, focus group, diary logs and a survey served as the primary data collection instruments. Secondary data sources included training resources and other resources, such as web sites and people who participants may have turned to for support.

Data were collected over the Internet because of the time and distance that separated participants from me. I was able to collect (a) five, one-hour interviews from participants to help answer RQ1, RQ2 and RQ3; (b) eight diary logs to answer RQ1, RQ2 and RQ4; (c) six focus group responses to answer RQ4; and, (d) I reviewed over 50 resources to help answer RQ1 and RQ3. Additionally, I collected five completed online surveys to address RQ3 and to provide a demographic profile of the participants.

Table 3 below describes when data was collected and processed.

Table 3. Data Collection

	Interviews	Focus Groups	Diary Logs	Resources	Survey	Other
11/4 – 11/11 2011	Conducted five interviews; began transcriptions	-	-	-	Created online survey	Obtained IRB approval
11/4 – 11/19 2011	Transcribed interviews	-	-	Collected offline materials	Revised survey based on interviews	Initiated analysis of interviews
11/20 – 11/26 2011	Analyzed data to inform diary logs & focus groups	Drafted focus group guide	-	Collected online materials	Conducted survey, collected 5 responses	Began Level 1 coding
11/27 – 12/3 2011	Continued analysis	Conducted online focus group	-	Reviewed materials	Compiled survey results	Continued Level 1 coding and memoing
12/4 – 12/23 2011	Followed up with interviews via email	Followed up on focus group via email	Used findings to create diary log protocols	Reviewed online forums, blogs	Analyzed survey results	Continued Level 1 coding and memoing
1/10 – 1/14 2012	-	Analyzed data	Collected week 1 logs	Analyzed data	Analyzed data	Began Level 2 coding
1/15 – 1/21 2012	-	-	Collected week 2 logs, analyzed week 1	Analyzed data	-	Continued Level 2 coding, refining, axial coding
1/22 – 1/28 2012	-	-	Collected week 3 logs, analyzed week 2	Analyzed data	-	Level 2 coding, refining, axial coding
1/29 – 2/4 2012	-	-	Analyzed week 3 logs	Analyzed data	-	Level 2 continued
2/5 – 2/11 2012						Level 2 continued, began triangulation
2/12 – 2/18						Level 3 coding, triangulation
2/19 – 3/3 2012						Level 4, validation, reliability

Interviews

Interviews are useful for integrating multiple perspectives and for developing detailed descriptions about participants. They help the researcher to learn more about things that cannot be seen through observations and to enable her to understand the participant's perspective (Lofland, et al., 2006; Patton, 2002; Weiss, 1994). The focus of the interviews for this study was to collect data pertaining to RQ1, RQ2, and RQ3. A semi-structured interview guide was developed and issued to each participant. The guide was informed using the conceptual framework depicted in Figure 1.

As expected, results from the first interview I conducted necessitated changes to the interview guide. I had to reword some of the questions and I had to add a few others to reflect some of the more relevant data that emerged from the first interviewee. The final interview guide is included in Appendix A.

While interviews can be an ideal method for collecting details from a participant they are not without challenges. Weiss (1994) offered caveats for the researcher to help her navigate some of the more problematic interactions that may occur. At times, participants may be unresponsive or feel that there is too much risk to answer a particular question. Occasionally, a participant may wish to paint a particular picture, which may or may not be true or may supplant the researcher's intentions. Weiss (1994) recommended that the researcher be prepared for possible interview failures by staying focused and by corroborating evidence among other participants to reveal the truest of data.

Taking Weiss' recommendations into account and being mindful of prior experiences in interviewing. I planned an agenda for interviewing the participants. First, I sent each participant an email to request their participation in the research study. I

informed them of the sequence of events of research that would take place over a three-month period. I provided details of each form of data collection and the expected time required for the participants. I then offered them a list of dates and times for the interview and asked them to choose the schedule most convenient for them. After receiving their responses I sent each of them an email confirming our scheduled interview and included an explanation of the IRB process and attached the form.

To conduct the interviews I used BlackBoard Collaborate™ because they were familiar with it and it would enable me to record the sessions, which would later be transcribed. I engaged each participant in one interview lasting about 60-minutes. The data collected from the interviews was transcribed using ExpressScribe, a free transcription software. To clear up any remaining issues I followed up with each participant via email. On some occasions, several emails were exchanged between participant and me.

I started each interview with a cordial interaction. I then discussed the Institutional Review Board (IRB) form and informed them of their rights, including that they had the right not to answer any questions, to withdraw at anytime without reprimands and that their identity would remain confidential.

To stay on track during the interview I relied on the semi- structured interview guide. After the first interview I made several changes to it because I wanted to improve the wording of some of the questions and I added a few additional questions to capture more robust data. After each interview I immediately transcribed the data using ExpressScribe. I then read through the transcription and made corrections as necessary. I offered each participant the opportunity to review the transcription but none of them were

interested or had the time. The transcription proved vital as a first round of data collection because an initial review of the transcription provided significant data that informed direction for the focus group session.

Focus Groups

Focus group interviews are especially useful when trying to get participants to recollect past activities. For example, they have the advantage of allowing the participants to reflect on their experiences "especially in response to other group members whose comments can trigger recollection" (Lofland, et al., 2006, p. 20). Focus groups are also useful in collecting any shared understandings between participants and are particularly beneficial when the interaction between the respondents is likely to generate important or interesting information which may not arise during one-on-one interviews (Barbour & Schostak, 2004; Creswell, 2008).

As research for this study was conducted over the Internet it was imperative that I understood some of the nuisances that could be encountered in virtual focus group interviewing. Virtual focus groups are a relatively new phenomenon in educational research practices. Here, data are gathered through group interaction using Internet communications and technologies (Bloor, Frankland, Thomas, & Robson, 2001). Rather than meeting at a specific time and place, virtual focus groups can be conducted asynchronously in discussion boards or synchronously in chat rooms or virtual meeting rooms.

There are many advantages associated with virtual focus groups. For example, they typically cost much less to facilitate since no one has to travel to a designated site

and they can accommodate larger groups (Bloor, et al., 2001; Turney & Pocknee, 2005). They are more readily accessible to dispersed groups since they use Internet technologies. Additionally, they may also reduce the interviewer effect – an effect realized when participants find the interviewer imposing. Virtual focus groups may also help participants to feel freer to express themselves since they can work behind the veil of the computer screen.

I originally set out to conduct the focus group synchronously using BlackBoard Collaborate™. However, I had difficulty organizing a schedule in which the participants could convene at the same time. I decided to engage them in an asynchronous focus group. Realizing that email was their preferred mode of communicating, I sent them each two focus group questions (Appendix B). Three of the five participants responded. When I received their responses I compiled them into one document and sent them each a copy and asked them to provide any comments they deemed relevant. They replied to each other offering some additional commentary that was useful and that proved some revealing insights about challenges they faced and benefits they realized. Their responses helped informed in part of the direction for the diary logs.

Diary Logs

Diary logs can be used to complement other forms of data, such as interviews and surveys (Flick, 2009). They are considered by some researchers as an unobtrusive form of observation because they allow the participant to provide the researcher with what has been going on and do not require the presence of the researcher to record events (Hyldegård, 2006; Palen & Salzman, 2002). Here the participant records his own

practices, beliefs and behaviors so that the logs can be used when the researcher cannot participate in direct observation (Lofland, et al., 2006).

In a study using online diary logs (Hyldegård, 2006) found that a time-limited, semi-structured electronic diary account proved more effective at generating useful data about participant actions. However, she cautioned that setting too many parameters might reduce the amount of free-form responses from participants.

In the final report of their three-year long study of parental involvement, Hoover-Dempsey and Sandler recommended that future research include diary logs because they would “complement parent self-reports of activities and mechanisms engaged during involvement” (2005a, p. 63).

Taking a cue from one of the Hoover-Dempsey and Sandler’s suggestions and since I could not engage in direct participants observation, the diary logs were a good option to enable learning coaches to document their own behaviors. For this study, I planned to collect diary logs weekly over a four-week period and participants were to be given the option to transmit them through email, or voice via Voicethread, a free online voice recording application. However, getting participants to commit to submitting the logs weekly proved challenging: The participants always seemed pressed for time. So, to make things as convenient for them as possible I sent out one request per week and asked them to submit their responses via email when they had time (Appendix C). I had three running themes that I hoped they would address. These themes included questions pertaining to how they supported their students (RQ1), how they got support themselves (RQ2), and what challenges they faced (RQ4).

At this point in the study one of my participants had to withdraw from the study due to a family emergency. The four remaining participants provided two diary logs each. The logs proved useful for capturing some of the behaviors they engaged as learning coaches.

Secondary Data Sources

Secondary data sources, such as documents, can provide a broad span of coverage of a particular group (Yin, 2004). They are seen as another form of unobtrusive observation and may include important references that augment other data sources. Stake (1995) suggested that documents can serve as substitutes for records of activities that researcher might not be able to observe first hand.

For purposes of this study, secondary data was collected from a variety of resources learning coaches indicated they used, such as the curriculum, materials and online resources and websites that participants said they used to support their students. (Appendix D).

The purpose for collecting this data was to obtain materials that painted a more holistic picture of the environment and systems within which these participants could use and to help answer RQ1 and RQ3. These resources proved valuable in that they helped shed light on what participants deemed important and what they relied on to support their students.

Survey

Surveys function as a tool for measuring, observing and documenting quantitative data (Creswell, 2008). They provide a means for capturing data which may lead to more

generalizable results and are especially useful when capturing data about participant demographics. For purposes of this study, a survey was used to help paint a portrait of the characters involved as participants in this study. The participants in this study were given a survey that included questions concerning their backgrounds, characteristics and demographics.

The survey was adapted from the Klein (2006) study, which included parents of students enrolled in cyber charter schools and from Andrade's (2008) study of home school parents. The final survey was created on Survey Monkey and included 21-questions (Appendix E).

Questions 1 – 12 were where multiple choice and asked for demographic data. Questions 13 – 20 were multiple choice and asked about school-related questions. Question 21 was an optional, open-ended and asked participants to include any comments idea or suggestions regarding cyber charter schooling.

All five participants completed Questions 1 – 20. Only one of them provided comments in the open-ended question, #21.

Participants and Setting

This study was conducted with five learning coaches whose children attended the Hawai'i Technology Academy (HTA), during the 2011/12 school year.

I was able to gain access to this group of participants because I knew three of them personally. To recruit the other two participants I employed the snowball effect, a process which involved leveraging known insiders to help draft additional participants (Henn, Weinstein, & Foard, 2006).

Participants

I intentionally sought to recruit a group of participants who came from diverse ethnic and economic backgrounds and who had a range of experiences as learning coaches. I also wanted to draft participants whose children ranged in ages from Kindergarten to middle school because this age range was appropriate in that it represented the age of students who were somewhat, but not completely independent learners and because prior studies using the HDS model included participants within this age range (Deslandes & Bertrand, 2005; Green & Walker, 2007; Hoover-Dempsey, et al., 2005a; Walker, et al., 2005).

Details of the participants are provided in Chapter 4: Results.

Setting

The setting for this study was the Hawai‘i Technology Academy (HTA), a cyber charter school located in Hawai‘i. During the 2011/12 school year, HTA served around 1,000 students on three of the Hawaiian Islands, including Oahu, Kauai and Hawaii. It was one of three such schools in the State of Hawaii.

The State of Hawai‘i currently enrolls 180,000 students in its 290 K-12 public schools (National Center for Educational Statistics, 2011). Of this, 32 schools are charter schools, and three of these are cyber charter schools (Center for Education Reform, 2011). The state’s three cyber charters serve about 2,100 students.

Hawai‘i was one of the first states to establish an online school to serve high school students. In 1996 it opened the Hawai‘i E-School, the first state-operated school using only online instruction in the U.S. (Clark, 2003). When federal funding ended for

the state department of education's Hawai'i E-School in 2000, the Hawai'i E-Charter was developed to replace it. The first statewide charter school, E-Charter offered a locally developed curriculum and approved diploma study and was free to any qualified Hawai'i high school student. Currently, the school is once again referred to as the E-School and is a supplementary education program run by the Hawai'i Department of Education's Advanced Technology Research (ATR) Branch and serves 200 to 400 students per semester (State of Hawaii Department of Education, 2012).

The island of Oahu is where HTA's learning center was located and where most of its students were enrolled. HTA opened its doors in 2008 with just 300 hundred students. In its third year, the school had achieved national test scores similar to other cyber charter schools across the nation: It had exceeded proficiency objectives in reading (81% versus 72% target) but it failed to reach targeted goals for math (55% versus 64% target). HTA was listed as School Improvement Year One (State of Hawaii Department of Education, 2012), which meant that the school had a set amount of time to improve its test scores in order to avoid any penalties resulting from the No Child Left Behind Act (2001). Sanctions might have included devising a school improvement plan to complete school restructuring.

HTA's Learning Center, which served as its main campus, was housed in a business district on the west side of Oahu. It resided on the second floor and had several rooms, which were used as either classrooms, meeting spaces or activity centers. The school also had several offices for staff and a reception area. There were no playgrounds or outdoor facilities, nor was there a cafeteria. The small library could be used as a

common room and shared space with open classroom, where art classes were typically held.

While the Learning Center was a place for students, most learning occurred off-campus, in the homes of students. Home settings range in size and appearance. However, most often, a room or area would be designated as the learning space. This area might have computers, printers, desks and other furnishings suitable to learning at home.

I am familiar with the school and its campus because my own children attended the school during the 2009/10 school year and I served as their learning coach. While all of the data collection was to be done over the Internet, my previous experiences provided me with an understanding for the operations of the school and of how school was typically arranged within the home setting.

Data Analysis

Qualitative analysis is a method by which the researcher pulls apart the data and tries to put it back together in a meaningful way (Stake, 1995). While there are no fixed formulas for analyzing qualitative data, Yin (2004) recommended that an effective method of analyzing data employs a general analytic strategy. This strategy is commonly implemented by following theory, which serves as a guide for assessing the validity and consistency of data gathered during qualitative research. This within case analysis involves comparing what the researcher has discovered against what has been described in theory and literature.

A theoretical perspective, including the HDS Model of Parental Involvement and the conceptual framework depicted in Figure 1 guided in part the analytic strategy for this

study because it was what the design, objectives and questions of this study were framed around. The theoretical perspective served as a guide for generating questions, a tool for seeing patterns within the data, and a tool for analyzing data using a foundation grounded in previous research. However, staying true to the nature of this exploratory study I did not limit myself to the boundaries drawn by the framework. I accepted all relevant data whether or not it fit within the details of the framework.

Procedures for Analysis

Once the general analytic strategy has been described, Miles and Huberman, (1994) suggested that the researcher needs to embark on a three-step process for analyzing data. The three steps they described involve (a) data reduction, that is the sharpening and focusing on relevant data which may be organized by patterns; (b) data display, whereby data is organized in a diagram in an illustrative way so that conclusions can easily be seen; and (c) conclusion or verification, where the researcher notes patterns that continue to emerge and identifies possible explanations for consistencies and even inconsistencies between relevant data. They suggested that these three steps be engaged in a continuous or iterative cycle.

Furthermore, an important consideration when conducting text analysis is that the researcher needs to remain situated with, or true to, the method she has grounded her studies in (Lacity & Janson, 1994). In my case, I chose to approach this study from an interpretivist perspective. From this approach I recognized that I was trying to understand the experiences of participants from their perspective rather than from an objective point of view and that I needed to acknowledge any particular biases I may have had (Flick,

2009). In this sense it was vital that I understood that any text provided by a participant represented “merely a small window,” and that I must diligently seek to learn more about the participant, his experiences and culture in order to provide an interpretation consistent with a subjective point of view (Lacity & Janson, 1994, p. 141).

Moreover, unlike a strictly positivist analysis, which would rely on counting the number of times a particular text appeared in the content, the interpretivist researcher realizes that the author of the text may seek to omit content they do not feel comfortable providing, or may include content they believe is safe or what the researcher wants to hear. This is relevant where a participant provides any text-based data, such as within diary logs, or where verbal data has been converted to transcribed text. Therefore, in order to provide a test of validity I needed to stay true to a thorough analysis of the data as opposed to merely a head count of text.

With the framework as my guide, I set out a plan for following the steps suggested by Miles and Huberman (1994) and for proceeding through the data analysis. First, and foremost, I set my mind to what Glaser and Strauss (1967) referred to as looking for the “fit” and “work” of the data. By “fit” they meant that the categories arising from the data results must be applicable to the study and must reflect the data. By “work” they meant that the results must be meaningful, relevant and explanatory of the behaviors being observed.

As each piece of relevant data became available I read and absorbed the data, discovering what it was about, but not reacting to it. This “discovery mode” (Lincoln & Guba, 2002) was important because it enabled me to pursue the data without feeling the pressure of assigning any level of importance to it. It was not until the second read

through of the data that I began memoing and taking notes of the codes that seemed to make sense of what I was observing. I carefully documented the codes to build a “chain of evidence” (Yin, 1994). This enabled me to assign definitions and descriptions to the codes so that I could apply them with consistency to incoming data. I considered this open-ended coding process as Level 1 coding (Creswell, 2008; Hahn, 2008).

During Level 2 coding, I began moving through an inductive process to try to verify my understandings and interpretations of the data. I would review the Level 1 codes and the raw data again and then I would compare my new understandings of the data across the multiple sources and the participant responses. I was inspired by a quote from Lofland, et al., (2006) which I tacked to my wall so that I could easily glance at it when I felt off track. It simply read, “What is this? What is this an example of? What is going on?” When I had the answers to those questions I proceeded to recode the data if necessary, and when I felt satisfied with the assigned code, I would organize it into more refined categories that seemed meaningful from more than one vantage point. These categories began the foundation of the patterns, which I would use later to make meaningful connections between what I was observing from the data that was similar or different compared to the literature. On occasions, I used in vivo terms to describe these patterns. Other times I would use terms that came from the framework and the literature or I would assign my own term that I believed best represented the data.

During Level 3 coding, I worked through the patterns making connections between them and merging them together where appropriate. This constant-comparison methods was employed to understand what I was seeing within the data and between the data and comparing it to what was already known in research. I employed what Creswell

(2008) referred to as axial coding. Here I began triangulating the refined patterns by comparing what was emerging between the participants and across the various data sources. This process of triangulation was a critical step for not only letting the most meaningful incidents surface but also as a way to begin validating my findings.

In the final phase, Level 4 coding, I worked to reduce and refine the patterns into three themes that captured the most important realities emerging from the data. From here I could compare what I had finalized with the literature to discover what similarities and differences existed.

Procedures for Quasi-Statistics Analysis

Quasi-statistical data collected from the survey was analyzed using descriptive statistics (Maxwell, 2009; Salkind, 2008). I used this data for two purposes, (a) to describe the background and characteristics of the participants, and (b) to compare what I was finding in the qualitative data with the responses collected from the online survey. The comparison between the qualitative and quantitative data proved exceptionally relevant when I was analyzing the patterns because it flagged irregularities. To clarify any inconsistencies I would either go back to the participants to seek clarification and/or compare the findings to existing literature. I also made sure to cross reference findings from the different data sources. For example, if data from interviews and focus groups suggested that there may have been an inconsistent finding between the two, then I would review data collected from the survey and diary logs to make an informed decision.

Consideration of Data Gathered from the Virtual Environment

It is important to discuss the nature of the virtual environment in which data collection took place because it presented a series of challenges not typically found in a study conducted in a real-life, physical setting. The Internet allows users to assume alternate identities, portray authentic identities or to mix up identities. Combined with its multi-layered reality, this makes data collection via the Internet a challenge. While I personally knew three of the participants, I did not know them in their capacity to serve as learning coaches and I was not there to observe them in their own settings.

Sade-Beck (2004) recommended that to avoid the “false dichotomy” between what is captured in the virtual world and real-life settings the researcher should collect data from both environments. In the case of this study, I tried to overcome the hurdles of time-space and real-life environments by collecting data from participants that grounded them in their own real world settings. For example, the use of focus groups seemed compelling for participants to discuss their realities because their thoughts, ideas and emotions could be confirmed and validated by their peers. Participants may also have found that diary logs provided them with opportunities to express their true sentiments and experiences because of the nature of diaries to represent very personal, real life events. Finally, because I have experience in the cyber charter school environment, I have a good understanding of what real life contexts exist and this gave me the advantage of understanding what real life may have looked like to these learning coaches.

Data Management

It is vital that the researcher establishes a well-planned and well-organized process for managing data before beginning to collect data. Hahn (2008) reminded researchers that qualitative research in particular relies on “intelligent organization.” (p. 1). To this end, he provided a practical method for using MS Excel to securely manage data, which I followed. For purposes of this study, data was stored on my personal computer hard drive and was routinely be backed-up onto a portable hard drive. When not in use, this portable device was stored in a secure location.

I labeled all data with anonymous descriptions so that it would be difficult for anyone else to recognize which data belonged to a given participant.

Data were saved and analyzed using MS ExcelTM, a spreadsheet software application. Transcriptions were processed using ExpressScribe, an offline software application.

Limitations

This study was limited in several ways: First, the small group of participants limited this study. Additionally, the participants were all fairly well educated and some had teaching experiences with adult learners. The small number of perceptions and behaviors that I collected from this group could not fairly represent the viewpoints and actions of all learning coaches.

Second, the nature of this study presented limitations. Because of the distance that separated the participants and myself, this study was conducted over the Internet. Conducting research in virtual realms poses a false dichotomy between what is captured

in the virtual world and real life settings (Sade-Beck, 2004). The Internet allows users to travel identified as their real selves or under another identity and it consists of a multi-layered world. These realities impose another dimension when conducting ethnography in cyberspace that is not necessarily encountered in physical world ethnography.

Additionally, I was not able to witness how participants actually supported their students and was only able to capture data that participants revealed to me in their own words.

Third, I was unable to collect data concerning how the children of the participants fared academically during the school year this study was conducted. However, participants reported that their students were doing well academically. However, without quantifiable data, it would be unreasonable to suggest that the types of behaviors the participants engaged in to support their children could be linked to their academic success. I was also not able to collect student voices. Clearly, student perceptions and beliefs should be explored in order to fully understand the effectiveness of this type of schooling.

Finally, my role as a researcher may have influenced what participants revealed to me. For example, some of them may have wanted me to know only the more positive aspects of being learning coaches for their children. Indeed, not all of them discussed problems or challenges they confronted as learning coaches. Whenever possible, I tried to facilitate open conversations, sometimes sharing my own challenges as learning coach. Occasionally, this would help the participant to carry on or to provide more robust information. Other times, I would follow up with an email because I realized that this would allow the participants time to think about their responses. Yet again, they may have tailored their replies to what they thought I may have wanted to hear. Typically, this

challenge can be faced when conducting interviews and often can be experienced in ethnographic studies (Emerson, Fretz, & Shaw, 1995; Lofland, et al., 2006; Weiss, 1994).

Validity

Validity in qualitative research represents the accuracy of a researcher's data (Merriam, 1998). However, it can be a complex matter and as Maxwell (2009) explained, qualitative researchers do not have the same luxury as quantitative researchers who can control for particular variables in order to avoid any data that may distort or invalidate their findings. As a result, the qualitative researcher must try to identify any potential threats to her data. She must bring to the surface her own personal preconceptions and beliefs and attend to them as biases which may infect her results. The researcher must tend to these biases by understanding how they influence her interpretations.

Where possible I employed Maxwell's (2009) checklist to help the qualitative researcher achieve validity. I followed the checklist by (a) conducting intensive investigations that led to more data and less dependency on inferences, (b) collecting rich data through intensive interviews to help provide variety of data, (c) searching for discrepant or negative data that may have been important to tend to rather than to ignore, (d) triangulating data by collecting data from a wide variety of sources in order to reduce the risk of bias and to "minimize misperception and invalidity of our conclusions" (Stake, 1995, p. 134), (e) collecting quasi-statistics, or simple numeric results originating from the data compare numeric evidence towards a particular conclusion, and finally, (f) comparing findings against established or published studies to help validate what was distinctive about the group being studied.

Moreover, my own experience as a learning coach for my two children and my familiarity with cyber charter schools provided me with reassurance that my findings were representative of the participant voices.

By tending to each of these matters and by looking to my own experiences I felt confident that the findings could be considered as valid.

Reliability

Reliability can be a difficult matter to contend with in qualitative research. This is due in part because the notion of reliability calls for the researcher to develop a study in which the findings be replicated by another researcher. Yin (2004) suggested that in qualitative case studies reliability could refer to the consistency with which it represents. In his study of virtual high school students Weiner (2003) found it rather difficult to establish reliability, and instead focused on ensuring validity. He did this by making the results trustworthy, useful, and complete. He also suggested that good, clear writing style and researcher positioning adds to the validity of a study.

Case study protocol is one method for resolving some of the issues concerning reliability. Yin (2004) described case study protocol as a clear guide of the procedures to be used during the research.

Where possible, I have implemented Weiss' (1994) recommendations and sound case study protocols by (a) providing the details of the steps I took to conduct the study, including a description of the conceptual framework used to guide this study, (b) including the instruments I used to collect the data in the Appendices section of this study, (c) describing the processes I engaged in to analyze the data, (d) employing

Maxwell's (2009) seven steps to ensure validity, and (e) clarifying my own biases related to this study.

Ethics

Ethical considerations should be the priority of a researcher's agenda. Creswell (2008) importantly pointed out the ethics should be a well-planned exercise commencing at the beginning of any research endeavors rather than as an after thought. This is especially relevant when conducting research in the online environment because there are additional issues to contend with that may not be visibly obvious as found in a non-virtual setting. Additionally, the practice of online research is still in its infancy and thus rules and codes of conduct for conducting online research are still in the formation stage (Rodham & Gavin, 2006). Using the Internet to conduct a study changes the research scenario. For example, there are a number of issues that arise concerning the anonymity and time-space distance found in virtual settings.

I fully understood that these concerns called for special consideration where I needed to take proactive measures to ensure that proper ethical protocols were taken (Markham, 2007). Because the Internet may be used as a "veil of anonymity" for some, I tried to concern myself with the honesty of representation from both my participants and myself (Buchanan, 2000). And, where the Internet is seen as a stage by others, I concerned myself with the stories told by my participants (Rodham & Gavin, 2006). This was not difficult to do because I have had experience as a learning coach and so I am familiar with some of the activities associated with being a learning coach and the feelings that arise when working so closely with your children.

I was aware that these issues of trust, voice and self-representation confound realities presented by both the researchers and participants and give further cause for the adage of “seeing is believing.” It is the unseen emotions, expressions and body language which are missing from the virtual setting and which make problematic what the research interprets and can, if unchecked, lead to an oversimplification of “complexity of the human experience” (Markham, 2007, p. 816). Where possible I tried to understand and capture the true essence of what participants meant by restating their comments and asking for clarification as needed.

Additionally, I was conscientious that privacy would be a concern held by participants and that I needed to maintain their anonymity and confidentiality for each participant. Rodham and Gavin (2006) recommended that the researcher use pseudonyms for participants when engaging them in online discussions. To address these concerns I made sure to protect participant identities by never sending them group emails, by deleting any references to their names when posting their replies and by never using their real names within the context of this study.

Informed Consent

Informed consent is a tool for ensuring that those who participate in a study fully understand the implications of their participation. It is a document that explains their rights, benefits of participation, information about the researcher and purposes of the study. It can also contain information about privacy, rights and representation in virtual settings and can address the ethical provisions made within the study. Additionally, it is

an important tool for ensuring that participants are treated with respect during a study (Mack, et al., 2005).

I followed the guidelines set forth by the University of Hawai‘i’s Institutional Review Board to seek approval for this study. I obtained an approval from the University’s Committee on Human Studies for my informed consent form (Appendix G). Additionally, I completed the National Institutes of Health Office of Extramural Research online course entitled, “Protecting Human Research Participants” and received a Certificate of Completion (#288874).

Participants of this study were provided with an approved Institutional Review Board (IRB) informed consent form detailing their rights of participation and the exact nature of this study. I followed up with each participant to ensure that they understood the document before I asked them to sign and return it to me. Facilitating this discussion up front with each participant helped minimize any concerns of representation, voice, trust and honesty within the virtual settings of this study (Buchanan, 2000; Markham, 2007).

Summary

In this chapter I have explained that this study was conducted as an exploratory case study because the goal of this research was to develop a rich understanding of learning coaches and how they supported their children who attended a cyber charter school.

The interpretivist lens through which I made my inquiries and interpretations was ideally suited for this particular study because it enabled me to gain a deeper understanding of the participants from their own realities.

I collected data from participants by (a) conducting intensive interviews with each participant, (b) engaging them in focus groups interviews, (c) collecting individual diary logs, (d) conducting a survey with each participant, and (e) reviewing documents, materials and websites concerning and/or used by learning coaches and cyber charter schools.

A conceptual framework grounded in the theory concerning parental involvement and research relevant to parent involvement in virtual, home and cyber charter schooling served as the tool guiding the general analytic strategy for data collection and analysis.

I tended to validity of this study by first acknowledging my own potential biases. Additionally, a seven-step strategy was followed to ensure that the findings were valid.

Reliability was tended to through the use of organized, well-defined case study protocols. These protocols were explained in detail within the data collection and analysis procedures contained in this chapter.

Finally, ethical considerations were ensured by maintaining participant confidentiality, securing data where possible and providing each participant with an explanation of his rights contained within an IRB approved informed consent form.

In the next chapter I will provide the results of the data collected from participants.

CHAPTER 4: RESULTS

This exploratory case study sought to gain a better understanding of how the five participants involved in this study supported their children who were enrolled in a cyber charter school. The purpose of the study was to explore the beliefs and behaviors of learning coaches as they supported their children's educational endeavors. The objectives were: (a) to better understand the breadth, depth and manner of educational support participants provided their children and (b) how they received support themselves.

As described in the previous chapter, I employed an inductive process for analyzing the data. This approach was intentionally used because this was an exploratory study and I did not want to confine the findings to pre-established categories. Otherwise, this may have limited my ability to collect and analyze data that was truly representative of the participants. However, by relying in part on a conceptual framework to collect the data, I was able to consider phenomena concerning parental involvement in their children's education that was already known to be relevant in studies involving non-cyber charter school students.

The goal of my research was to conduct an interpretive study in order to achieve a deeper understanding of the participants' own realities from their perspectives. Staying true to my goal, I have used quotations from the participants as much as possible in order to represent their voices. This has been done so that the reader could gain an appreciation for what it was like for these participants as they experienced being learning coaches for their own children.

The results from the analysis are presented within this chapter. First, I begin with a description of each of the participants. This demographic profile will help the reader to

gain a better understanding of the background and experiences of each of the participants. Next, I present a description of the setting in which this study took place, including the school called the Hawai'i Technology Academy. Then, I describe each of the three major themes that emerged from the data. These themes were not based on pre-conceived categories or theory. Rather, they emerged naturally from the data and reflect the patterns that were consistent across the participant responses and the data sources. At the end of the chapter I provide a summary of the findings.

Participants

There were five participants involved in this study. I have assigned each of them a pseudonym to protect their identity and to maintain their confidentiality. Four of them were parents of students attending HTA. One of them was the grandparent of a student enrolled in HTA. They all had at least one to two years experience as a learning coach. One of them had more than four years experience and had home schooled her oldest daughter prior to joining HTA. Below are details concerning each participant.

Aina had three children enrolled in HTA at the time of the study. It was their second year attending HTA. Her twin son and daughter were in the 4th grade while her youngest daughter was in Kindergarten. She described her twin daughter as one the who struggled with schooling. Her twin son fared quite well with academics, as did her youngest daughter. Aina was not working at the time of the study. She and her husband enrolled the children in HTA when they moved to Hawai'i from another post because they were concerned about the Hawaii public school system and wanted to be able to give their children an affordable, quality education.

Iako had two children enrolled in HTA at the time of the study. This was their second year enrolled in the school. Her daughter was in 2nd grade and her son was in 5th grade. She reported that her daughter excelled at reading and language arts. She described her son as smart but easily distracted. Iako and her husband worked full time. She often traveled for work. They divided their time for the children's schooling between each other. Prior to enrolling the children in HTA they were attending a private elementary school. They transferred the children to HTA because they believed that the private school was not able to meet the academic needs of their children.

Makai had one grandson attending HTA. This was his second year attending HTA. Makai worked full time as an IT specialist. His grandson was in the 7th grade. He described his grandson as a child who liked to work on his own and reported that he was doing very well academically in this setting. Makai transferred his grandson to HTA because he was not doing well in the traditional school setting. Makai also said he was not socializing well with other children. Makai believed that his grandson had academic potential but believed that an alternative learning environment would better suit him.

Uli had three children, but only two were school-aged. Her oldest daughter was enrolled in 7th grade and her middle daughter was in first grade. She described them as both doing very well academically. They had been attending HTA since its inception in 2008. Prior to enrolling in HTA, her oldest daughter was home schooled. They switched to HTA because they wanted access to the K12, Inc. curriculum. She worked part-time..

Wai had two children enrolled in HTA. This was their first year at the school. Her son was in 5th grade and her daughter was in 3rd grade. She reported that they were both very advanced students. Wai and her husband owned their business and they both worked

full time. They transferred their children to HTA from a public charter school because they did not believe the public charter was meeting the needs of their academically advanced children.

Results from the survey helped to paint a general picture of the characters involved in this study. In general, the participants were from middle class families. They were all well educated and several of them held advanced degrees. Three of them reported that their spouses also had college-plus degrees. Two of them had experience teaching adults.

As described above, the survey demonstrated that there were a variety of reasons why they enrolled their children in HTA. However, the majority of participants in this study chose to enroll their children in this school for learning opportunities. To be sure, the top three responses garnering the majority of participant votes concerned (a) being able to give their children an individualized learning experience, (b) providing their children with opportunities to learn their own pace and (c) meeting the student's unique learning needs. Running a close second were academic reasons and to take advantage of the flexible schooling opportunities.

None of the participants indicated that they chose the school for religious purposes. Three of them indicated that religion was not at all part of their home education practices. One reported that religion was part of their family life, but was not taught. Another indicated that religion was an important part of their family life and that some religious education was taught.

In general, the participants reported that they were pleased with the K12, Inc. program and felt that it was meeting the needs of their children. However, three of the

participants indicated that they were thinking of leaving HTA next year. This was because they said it was too time consuming and they were not sure that they could maintain the level of commitment required to be learning coaches for their children.

Setting

Participants and their students engaged in this school primarily from their homes. At least once per week their children would attend classes and participate in activities at the HTA Learning Center. Some of them also reported occasionally doing schoolwork at libraries or while traveling.

Participants did not provide many details of their home school settings. However, each of them described that their children had designated places to engage in schoolwork that were typically situated within common areas of the home. Wai said that she had set up a workspace for her children in her home office so that she could continue to work but also be there for her children when they needed her. Some of them would occasionally work in their bedrooms or outside. Hawaii has a climate conducive to doing schoolwork outside and some of the participants felt particularly lucky to be able to take advantage of this. For instance, Aina often let her children do their reading outside.

At the time of this study HTA had been in operation for four years. There were 1,000 students enrolled in the K-12 cyber charter school, which served students on three of the Hawaiian Islands. The main Learning Center and HTA's headquarters were located on the island of Oahu. The building where the school was located was situated within a commercial business center along one of the busier streets on the Leeward side of the island. It had none of the usual features typically associated with a public elementary

school. For example, there were no playgrounds, cafeterias or sports grounds. The classrooms were set up so that they could serve multiple purposes. For example, one room might have served as a place for the science teacher to hold labs and then might be used later in the day by the Lego Robotics club to work on its group projects. The common area library could also serve as a place to hold school events or shows. Students and parents tended to crowd in the lobby or hallways while awaiting the start of their classes. There were numerous activities scheduled throughout the year, such as a fall harvest festival and the annual talent show.

The school had a partnership with K12, Inc., which provided the curriculum, technology for students, and its learning management system. K12, Inc. also employed the administrative staff, including the principal. The teachers were all certified public school teachers who were employees of the State of Hawai‘i Department of Education and they were union members of the Hawai‘i Teacher’s Association.

During the course of this study the school experienced a number of setbacks. Its principal was under investigation for improper use of school funds and was fired by K12, Inc. (Hawaii News Now, 2012; Honolulu Civil Beat, 2012). The vice principal, a State of Hawai‘i Department of Education employee, was placed on administrative leave because she was also implicated in the scandal. Additionally, the school did not meet the 2011 Adequate Yearly Progress (AYP) as mandated by the federal act No Child Left Behind. As a result it is currently listed as School Improvement Year One. However, despite these setbacks, the participants did not seem effected. They did not indicate that the school’s woes affected their ability to continue educating their children.

Three Important Themes

Three significant themes emerged as a result of the analysis of the data. These themes emerged naturally. They were not generated from existing literature, although in some cases they reflected the literature. The themes, *Learner Centric*, *Resources* and *Real Life* are summarized below and then elaborated on throughout this chapter.

Learner centric referred to the way in which participants demonstrated how they supported their children's learning. By being keenly aware of their children's needs the participants revealed that they could tailor their children's educational experiences to suit their children's needs. Secondly, the way participants supported their children's needs tended to be based upon how they perceived their roles as learning coaches and how they involved themselves to serve the educational needs of their children.

Resources referred to the tools participants used to support their role as learning coaches. These "tools," might have included (a) people, such as their partners or teachers; (b) technologies, such as the Internet and iPads; and (c) others, such as the K12, Inc. curriculum and training. Some of the "tools" were relied on more than others and some were seen as necessary or desirable, but perhaps at times frustratingly inaccessible.

Real Life was the concept of using real life examples to measure or validate whether or not a participant believed his children understood the content. It also included how he reinforced his student's learning or modeled good learning practices for his children. In general, participants tended to believe that their children "got it," meaning they truly understood a concept, when they could connect a lesson to a real life example.

Learner Centric

The major theme, *Learner centric* referred to the way participants demonstrated how they supported their children's learning in this unique schooling environment. There were two important patterns that surfaced from the data which comprised the theme Learner Centric. The first pattern, *Awareness*, represented the acute alertness a participant exhibited with regards to his child's educational preferences – such as the child's learning styles or his acquired knowledge. The second pattern, *Child Needs*, emerged as the way in which a participant tended to his child's specific educational needs. Together, these two practices seemed to be fundamental drivers for how a participant supported his child's learning.

Awareness

Awareness was a pattern that resonated throughout much of the data collected from participants. It referred to the heightened alertness a participant had of his child's educational status and preferences. In part, the participant was aware because he knew what the child knew and also because of the intimacy shared between the parent and the child. His awareness seemed to facilitate the way he would (a) adapt to suit the child, (b) encourage the child, (c) reinforce and measure what the child was learning, and (d) instruct and guide the child.

Adapt

Several participants commented that part of the responsibility for being a learning guide was knowing what the child knew. As a result, the participant could *adapt* his

practices to suit the learning needs of the child. For example, Makai said that he watched how his grandson worked and then adapted.

“I try to watch his daily routine, see what he enjoys and what he doesn’t and then try to incorporate those things into the learning. When he’s moody, not into it, I have him take the day off rather than force him to do it. He doesn’t learn well when he is distracted and I find it’s just better for him to get some rest or to do something else and come back the next day to do school work.”

He also found that he had to adjust his own teaching strategies because he “...learned that he (his grandson) knows what he needs help with more than I do. It took some adjustment on my part being used to traditional teaching methods.”

Similar to how Makai “watched” his grandson work, Aina revealed that by observing her oldest daughter she learned that she was a kinesthetic learner. Aina found that her daughter needed to move around and engage with learning materials in order, “to get the concept.” To address this need, Aina acquired a white board to allow her daughter to get up and go to the white board to write down her thoughts. She also adapted how they worked through vocabulary lessons by letting her daughter act out the words to develop her own understanding of their meaning. She reported that she needed to spend more time guiding her daughter through lessons than she did her son.

“With my son there are certain things that I am less involved with because I have realized that he has a handle on it. He’s more independent. So sometimes I just mention have you done this? Or if there is something that he is confused about or gets wrong I can just say something to him like maybe it could have been this, or did you think about it this way? ”

Whereas, for her daughter she said, “We would do vocabulary and she wasn’t successful and I realized that she needed to listen to it then stand and act it out so she got a better understanding of it.” She also reported that when her twins were younger she could teach them together, but her son had taken off in math and so she “...used to teach them math together but I realized that I was holding him back and so like today he was going over some math with her with which would have been my part. I was working with my kindergartner. But of course I will go over it with her.” For her youngest daughter who was just in kindergarten, she spent most of her time guiding her through the lessons one-on-one, “So I have to sit beside her and read with her if it’s a reading book or reading instruction or having her count or gather something in science where I am usually at her side.”

In another example, Aina reflected on a time when she watched as her daughter struggled taking a particular math test. She recalled that when she began this type of schooling she would get very upset if her children did not pass the tests the first time. Then, she watched a K12, Inc. online video that suggested it was okay for students not to master every test the first time around, and which encouraged learning coaches to let the students go over the materials again until they were ready to retake the test. She described that having seen the video she changed the way she felt about mastering the materials.

“As a matter of fact, today my daughter took three of them [math tests] and did not pass one of them. And when I first started teaching them it would really bother me if they didn’t master the first time. Whereas, making mistakes is how we learn. I don’t get that bent out of shape about it. Yes, the first time they learn it

makes my life easier. But I would rather they learned and understand it then okay they passed this test.”

Adapting the environment to suit the child was another way a learning coach might have responded to how her child learned. As described earlier, Aina explained that she learned her daughter was kinetic and needed to move around during lessons. So, she and her husband bought a large whiteboard for the children to get up and write out problems or answers to the lesson they were working on. She reported:

“We have a whiteboard ...that I think has been very effective this year. They can go up to the board and just kind of change the environment from sitting at their desks. Or go outside or out front and write on the board, or writing the math up on the board and having them come up and writing on the small board or just using a variety of tools.”

Sometimes it was a matter of acquiring additional materials to suit the way a student learned. Aina described that to help her daughter learn how to do estimations she acquired a family appointments calendar that appealed to her daughter and which she knew would be useful for all the family. Letting her daughter use the calendar to count and estimate days helped her daughter to connect the concept of estimating to her own world.

Like Makai and Aina, Uli also adapted her teaching strategies to accommodate her children’s learning. For example, Uli’s diary account of working on a lesson with her younger daughter gave a snapshot of how figuring out her daughter’s learning style helped her adapt her teaching strategy to engage her daughter in the lesson.

“I have a kinetic [sic] first grader. During a language arts lesson we do a lot of singing and dancing. I use lots of voice changes when reading stories, dancing to imitate how new words feel to my student and any songs to learn parts of speech. The teacher notes and tips [from K12, Inc. curriculum] may be what I sing or some times I make it up. The lesson has a rhythm to it. We always end with a recap. Then I see how the songs and dance helped her memory.”

Similar to how Makai adapted the day to suit his grandson’s moods, Uli provided another example suggesting that by knowing when her younger daughter was tired she could adapt and change the course of the day.

“Everyday is different. Based on my personality and that day. Based on their personality and their day. I try to mirror them as much as possible. And I am also very clear with them about why we may be changing the way we do instruction. For example, if my little one is kind of tired I say okay we can do math today. She is really good at math. I say okay you’re tired today we’ll do math today and tomorrow we can catch up on the other stuff. So knowing their situation helps you instruct them better.”

Encourage

The K12, Inc. curriculum and its learning coach instructions encourages the learning coach to adapt to suit the educational needs of her children. For example, its *Teacher Tips*, which are instructions provided to learning coaches and which are embedded within the lesson materials, frequently recommend that learning coaches should observe how their students were working through the materials and that if they

notice that a student might be struggling then they should adjust the learning activities to better suit the child. The Tips typically offered suggestions for how to do this. For instance, one sample lesson concerning math for kindergartners suggested – “If your child is having difficulty remembering the subtraction facts in her head while she finds the differences, let her use paper and pencil to write the problems down.”

Working with multiple learners and trying to accommodate their individual needs proved challenging for some participants. For example, Aina exclaimed that for her, “... three different learners and different learning styles is probably the biggest [challenge].” Aina, and the other participants with multiple learners, reported that they usually managed to overcome this challenge by setting one learner up to work independently so that the learning coach could provide one-on-one assistance to the other child. They would then alternate their day, splitting their time between their students based on who needed assistance.

Knowing what their children needed could be gained through keen observations of the child’s working habits and his moods. A willingness to adapt to suit those needs was a practice participants seemed to engage in regularly. While working with multiple learners, each with his own educational needs, could prove challenging, the participants seemed to devise ways to overcome this hurdle and to be there for their children as they needed them.

Participants revealed that for them, *encouraging* their children through schooling was mainly about keeping them motivated so that they could progress through the curriculum. It also involved praising them for a job well done.

Iako described that doing a lesson that her children enjoyed was a way to motivate her children to get the work done: “Or for my kids doing an art lesson is great! It’s exciting so let’s work on this math problem quickly then we can move onto our art or music lesson.” Additionally, she explained that she realized that play dates were a major motivator for her son. She explained, “If he risks losing a play date because he hasn’t done his work, he will complete a task he’s been sitting on for one hour and five minutes!”

Similarly, play time for Uli’s youngest daughter was also a motivator. Uli described that she would encourage her daughter to get on with her work and complete her tasks so that she could have more time to play.

Encouragement could also come in the form of an intimate gesture, like a hug or a high five. It could also have been more nurturing. For example, Aina explained to her older daughter (who struggled through some of the math concepts while her twin brother breezed through them), that it was okay to not be great in every subject matter. She said, “Also when one may have done well on something and the other one is not, we talk about how things are different and everyone has their own strength and so we talk about their strength.”

Feedback was another way participants encouraged their students. For instance, Wai said that she and her husband frequently offered their children verbal feedback concerning their writing. Likewise, Uli typically engaged in open dialog with her daughters to let them know how they were doing and to let them know that she was interested in what they were doing. She said, “I encourage them through active listening and engagement. So I’m not an outsider.”

Likewise, Aina explained that her children appreciated that she knew what they had been learning and she believed that this encouraged them to have discussions with her, or her husband, about what they were learning. She felt that they recognized her as being part of their learning and this, she felt, was a motivating factor for them.

Participants also used technology as a way to reward their students for a job well done. For instance, Wai described that, “Right now the reward is choice in apps for their technology.” Iako’s son was also motivated by technology and she knew that her son was more inclined to read when he could use her e-book reader.

At times, motivating the children to keep progressing through the content proved challenging for some participants. Aina explained that she occasionally faced difficulties just trying to keep her older children making progress through the content while she had her attention focused on her younger child. This was a point of frustration for her: “...they are not as independent and self motivated as I would like.”

Similarly, Iako found that sometimes motivating her two children to get their work done could prove difficult because of the challenge of wearing two hats – one as parent and the other as teacher .

“...They push our buttons by refusing to comply with our requests to do their work. There is no barrier between parent and teacher and that is certainly the most trying part of home schooling. We are quite strict so when they cross the line and become disrespectful to a level we know a teacher would not tolerate then they lose privileges. That seems to work but it’s a lot of effort.”

Additionally, Iako described her frustration whenever her son experienced what she called “attention issues.” She said, “When he lost interest in a subject he would either

procrastinate, take too long to complete the task or just try to get away with the minimum amount of work to meet the task requirements.” This, she explained, typically would occur when he had writing work. Even more frustrating for her was when he was given a task to complete something he liked he would “get it done fast!”

An anonymous comment posted on the open-ended part of the survey reflected Iako’s concerns about discipline; “Education material is not the problem. Handling discipline issues is a big challenge and support could be provided.”

In summary, the data revealed that participants encouraged their students to stay motivated by giving them rewards, praise and feedback. Importantly, participants were keen on exactly what motivated their students. Being an integral part of their children’s learning was also a way to encourage the children to stay motivated. Learning coaches could be nurturing when they supported their students and they could wrap family values into the way they encouraged their children. However, some participants faced challenges when trying to keep their students motivated and seemed to be interested in solutions to help them overcome these types of obstacles.

Reinforce

Several participants reported that knowing what their child knew was rewarding because it facilitated their ability to *reinforce* what their children had learned and it helped to reassure them that their children were in fact learning.

Uli described that “without be engaged with her [daughter] I would not be able to support her.” Knowing her daughter’s status enabled Uli to “bring that [subject] back up if she needs it later or just in the future I have it in my head because I know where she is.” She reported on one occasion that exemplified this concept:

“For example, my children and I were in the car one day. My youngest just learned to read. As we drove we saw a bus with an ad that had to do with the environment. We just completed a lesson on appreciating the environment. She then began to recite some of the facts she learned. As the learning coach I knew exactly where this conversation was coming from. I engaged her immediately and helped her through the facts. She was so excited. I do not believe I would have been able to engage with her without being a part of her education.”

Likewise, Aina shared that sometimes reinforcement occurred because she was aware of what her students knew and she was always searching for opportunities to engage them outside of the lesson: “Sometimes it is just riding in the car and talking about multiplication tables so we might do multiplication tables for 7s or 8s. There are just a variety of things that I am on the lookout for because I know that we talked about it.” She also said that reinforcement was also a two-way street. She stated this was because her students knew what she knew and what she had guided them on so they would engage her and bring up concepts from lesson on their own:

“It’s always on my radar. But, then it’s just as much on my children’s radar too because sometimes they will bring to my attention, ‘mommy we did this in science,’ or ‘we did this in math.’ They bring it up probably just as much as I do. And because they know that I was along side them teaching them they can bring it to my attention or to our attention when we do this together.”

Similarly, Iako found that engaging in dialog with her children about their learning was important because it helped her to know where she needed to reinforce their learning. For example, she described that she “...often had a chat with them [her

children] after they've finished a test to see what they understood." Sometimes, she explained, during these chats she could tell whether they had understood the lesson just by "...the look on their face if they are getting it or not."

Participants expressed that reinforcement occurred spontaneously and in settings not necessarily related to school time. For example, Iako shared that "The other things that we try to do maybe not so formally we try to relate things they were learning with real life things."

Likewise, Uli reiterated that, "...it's not planned." But she also warned that in order to reinforce she needed to be aware of what her students are learning: "But again if I'm not actively listening or actively engaged I cannot identify those moments." Wai's report corroborated Uli's that reinforcement did not necessarily occur all the time but that it occurred because they were aware of what students knew. Wai said, "It's probably not on an everyday basis. But because we are aware of what they are learning it just comes up through discussions either at the dinner table or when we're hiking or those kinds of things."

At the end of most of the K12, Inc. online lessons there is test given to assess if the student mastered the content. An interesting pattern that emerged from four of the participants was their belief about the value of these tests. They believed that the tests were good markers, but not true indicators of what their children truly knew, or more importantly, what they could with the content they had learned. For instance, Iako stated that, "It's not just about the test." She said that she has, "...had lessons redone even if they took the test on the screen and passed. I say well we're gonna do that again." This usually happened because she knew that they did not grasp the concept or that they had

skimmed through the lesson and she would ask them follow up questions that would reveal what they had missed.

Similarly, Aina suggested that the tests were “markers,” that “you have to have measurements,” but that she acknowledged there was more to it than just test scores. On the other hand, only Makai believed that the tests were sufficient at measuring what his student acquired. Although, he did say that he still would occasionally ask his grandson how “could you apply that?”

In summary, reinforcement was not a planned or formal event. It occurred when the moment presented itself and most importantly, it occurred because participants knew what their children knew. This enabled them to take advantage of the teachable moments. And thus, they were able to seize the moment. These occasions were also seen as opportunities to measure what the child knew. Along this line, one pattern that emerged from four of the participants was their belief about the value of these tests. They believed that the tests were good markers, but not true indicators of what their children truly knew. For most of the participants, how the child could apply what he knew to real life was an important indicator of what she had learned. This theme, Real Life, is discussed in detail in the section entitled, “Real Life.”

Instruct

Being aware of their children’s learning preferences and their acquired knowledge was important for participants when they *instructed* and *guided* their students through the lessons. For example, Aina described that it was important to be “...very aware of their learning styles so you can focus on those things within K12 [curriculum] and how they learn and being able to say take these things to get the joy out of this lesson.”

In Iako's case she adjusted how she guided her children based on what she was aware of that they knew and, in part on the lesson. For example, she found that for math she would "...be standing next to them [her children] and asking them to read the problem to themselves, but to think it out loud." She said that she sometimes had "a chat with them" to know where they were and observed how "quickly they are doing things" so that she could adjust the parts of the curriculum they might have needed to review or that they could skip over. This way, she reported, that she could follow what they knew and then "...guide them along to help solve a problem." During art lessons she "might be reading the text and expanding on some of the statements to make sure that they understand and providing extra examples if there is something that they are not familiar with."

Likewise, Uli reported that the most important strategy she used for instructing her older daughter involved a lot of ongoing dialog and this she claimed was one way she stayed aware of how her daughter was doing. She stated that being "on top of the lesson," was important." This open dialog facilitated a learning experience that her daughter felt she shared with Uli, and so she was more ready to ask for help and to feel confident about what she was doing.

An account from Aina's diary log gives another example of being aware of what the child knew.

"I knew off the top that she didn't know this answer [to a math problem on estimation]. She started guessing and had the look of guessing. But I also know she knew how many days were in a week. When I got it [a calendar] she went through each month and stated how many days were in each month. This was

after she asked what were the numbers down the side of the calendar. She also knew we spent two weeks in an Ohio on emergency leave over the holidays.” So I asked her how many days were in a week. She told me. Then we went to the calendar and repeated each month and stated the number of days in each month. After all of that we went back to the computer and looked at the question. She confidently could answer the question. Then we continued on with the skills builder section. Then there were activities she had to determine if the answers the characters in math decided were accurate. I started out reading them to her. Then I had her start reading the numbers. I gave her a white board and the manipulatives to decide which one she would use. She decided to sketch each problem on the white board. Next she had to continue doing estimates. I read most of them to her since she is just learning how to read. She decided to use the cubes for those. She continued to work on the problems until she came to one that looked very different and waited on me to assist her.”

Makai’s awareness of his grandson’s personality proved an important driver for how he guided his grandson. He knew that his grandson was independent and “a loner,” who preferred working on his own. So Makai said that he used the “flip technique” to guide his grandson. He described this as having his grandson read the materials and study them on his own, then Makai would be there to guide him through his work or to help him through an experiment.

Three participants said that knowing what their child knew enabled them to help their child engage in critical thinking and problem solving. For example, Uli said that, “The greatest benefit of being my children’s learning coach is the ability to encourage

critical thinking outside of the classroom.” She gave two illustrations of this. First, she described how her younger daughter read a billboard about an organization dedicated to saving the environment and she was able to explain why it was important to support that movement. In another example involving her older daughter, she explained that when they went to the beach one day she was able to classify a sea cucumber in the scientific terms she had just learned. And Uli, aware of the recent lesson, was encouraged that her daughter understood the content.

Aina gave a similar example of a time they were on a family vacation in Georgia and her daughter commented on the importance of the Georgia peach to Georgians. Because Aina knew her daughter had never been to Georgia nor had she studied it, she realized that she was using the skills she learned from another lesson regarding states to surmise what was important based on her observations. Aina explained, “...she was problem solving.”

An anonymous reply to the online focus group similarly described the benefits participants found in knowing what their students knew.

“The greatest benefit of being my children’s learning coach is the ability to encourage critical thinking outside of the classroom or school day time. Where there are subjects we have discussed that come across our lives it is wonderful to interact with them [the children] about the things they are learning.”

Another comment from the focus group data said, “Most amazing when they take in the world around them and then draw a conclusion!”

Sometimes, however, coaches would guide students based on their own personal values. For instance, Wai reported that she and her husband had different approaches for

instructing their children. Where her husband's goal was to help their students to be as independent as possible, she tended to watch over them more, checking on their work throughout the day and being more involved as they went through the lessons.

Several examples emanating from the data of how participants actually instructed or guided their students seemed to reflect a constructivist approach. Table 4 below outlines some of the characteristics applied in constructivist teaching methods compared with practices engaged in by participants as they described how they supported their students. The contents contained in Column A: Constructivist Teaching Practices were adapted from Brooks & Brooks (1993). Column B provides an example of a practice similar to the one described in Column A that emerged from the participant data. Column C : Participant Voice contains an excerpt from the interviews with participants which represents the practices described in Column B.

Table 4. Comparing Participant Instructional Practices

Column A Constructivist Teaching Practices	Column B Participant Examples of the Practice	Column C Participant's Voices
Pursuit of student questions is valued	Conversed with student and promoted student's independence through open dialog	"So we might do something where I am listening to her where she feels more responsible for her own work."
Dialog with student to help student construct knowledge	Dialoged with student throughout school day and beyond aligning learned concepts to real life	"As a family we talk about those things and we try to bring into real life something that relates to what they've learned"
Learning is interactive, building on what student already knows	Aware of what student knew and guided student based on this and the task at hand	"I knew exactly where this conversation was coming from. I engaged her immediately and helped her through the facts"
Teacher's role is interactive	Learning coach is intimately linked to student through school and home life and supported student as needed	"I do not believe I would have been able to engage with her without being part of her education."
Teacher is a facilitator who coaches, mediates, prompts, and helps students develop and assess their understanding, and thereby their learning	Learning coach was "guide" who supported student as needed. Relied on teacher to be content expert. Dialoged with student to see how connected to real life	"He knows what he needs more than I do. I help him when he needs me."
Assessment includes observation of student work, tests, where process is as important as product	Placed importance on how student was able to connect what had been learned to real life, test are seen as markers, but priority is application of knowledge	"I want to make twice the number of pancakes. Let's figure this one out."
Promote student collaboration	Appreciated the opportunity the student had to work in group setting while at learning center; involved student in groups and clubs to give them socialization opportunities; found opportunities for siblings to work together	"Today he was going over some math with her (sister) because he had already completed the lesson and could help her"
Materials used include primary source materials and manipulatives	Used online and offline resources provided by K12, Inc, as well as other educational websites and used hands-on tools and manipulatives usually from home life	"They were putting together a bike rack using some plastic pipes. He looked up it up online and he printed off the instructions and they [the children] had to read the instructions and had to constantly go back to the instructions and measure."

These practices were certainly not the only approach to instruction that the participants gave their children. Sometimes, as Wai described, she merely placed “their lesson in front of them” and stood by to see if they needed any further assistance. Similarly, Makai seemed to be quite hands-off. This was because, as he explained, his grandson preferred to try it on his own and go to Makai when he deemed he needed help.

In summary, participants seemed to be alert to the importance of engaging their children in problem solving and critical thinking. The data revealed that they tended to guide their children by being very aware of their children’s learning styles, preferences and needs. On the other hand, some data revealed that at times, participants guided their students because of what they deemed valuable or necessary, or based on what time they had available. Some of them seemed to engage in instructional practices that resembled a constructivist approach, while others took a more hands-off approach and stood by as if they were guides on call.

The patterns discussed in this section – adapt, encourage, reinforce and measure, and instruct/guide the children – all carried an important overtone: Awareness. Participants revealed that by being keenly aware of their children’s needs they could tailor the educational experiences to suit their children’s needs.

Child’s Needs

The way participants tended to their children’s needs played out between what they perceived their *roles* as learning coaches to be and how they *involved* themselves in their children’s learning.

One of the interview questions sought to capture a better understanding of how participants tended to their children's needs, how they supported them and who the participants believed was ultimately responsible for their children's learning. To begin, participants were asked to look at a diagram depicting an X/Y axis where the X-axis concerned who was responsible for learning outcomes while the Y-axis was about who was responsible for providing instruction. Participants were to put a mark on the diagram to identify their beliefs.

Figure 6 represents a compilation of the participant responses to the diagram. The letter next to each demarcation represents the first initial of the participant's pseudonym. The figure shows that all of the participants described their role as ultimately the one responsible for providing instruction to the student and for the student's learning outcomes. Aina's statement captured the type of responses received from the participants: "We do most of the instruction. We have a greater responsibility."

Learning Coaches: Where do they fall? How do they perceive their roles?

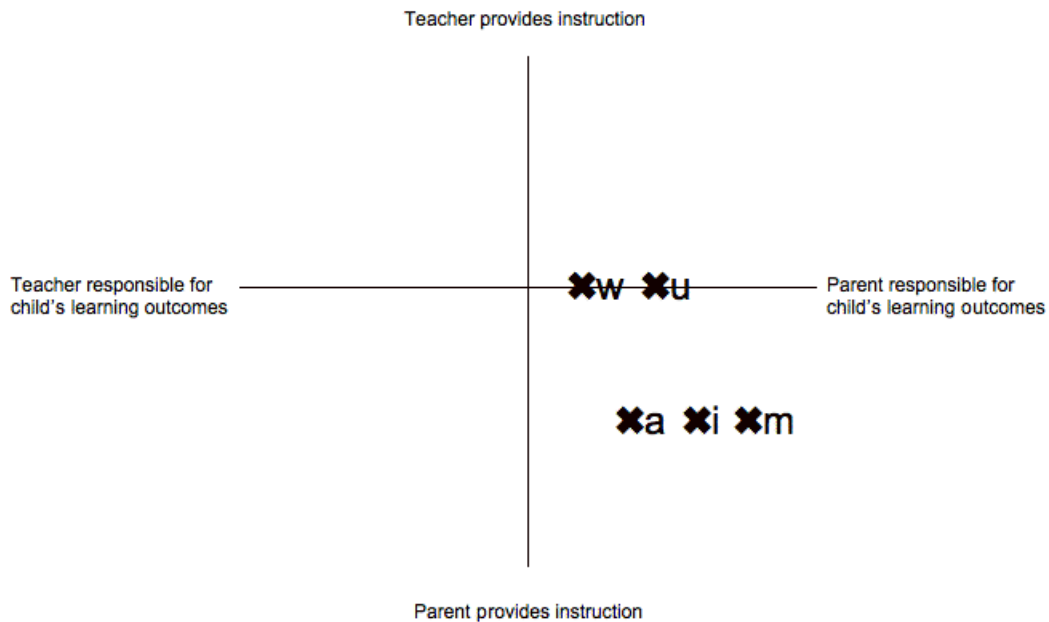


Figure 6. Learning Coaches Perceptions of Their Roles. Diagram depicts responses collected from participants concerning an interview question about their beliefs of their roles compared to teacher roles.

To look more in depth at their responses, participants were asked first to describe their top three roles as a learning coach. (Note: The way they perceived the teacher roles is described in the section entitled, “Resources: Teachers.”)

The data showed that they were united in what they believed: They described their top three roles as keeping their children on track, setting expectations for quality work produced by their children, and guiding their children through the learning. Their explanations revealed a subtle drive that their roles were based upon their children’s needs.

Keeping the children *on track* and progressing through the content was one of the top rated priorities for the learning coaches. The K12, Inc. learning management system electronically tracks a student's progress but it is the learning coach's duty to log the student's progress. Makai stated simply that it was his responsibility to "make sure he [his grandson] is completing the lessons on schedule so he doesn't fall behind."

Aina's description of her role offered insight beyond just checking off the progress chart.

"I think as the learning coach to make sure that they are staying task on subject and not just the one subject that they enjoy that okay you've spent time on four things of spelling but you haven't done history or you haven't done science or composition and keeping them motivated as far as giving them ways to do the lesson in a different way."

She also stated that as a guide it was also her responsibility to teach her children "...how to learn" and that her role was "not just about teaching the content." She summed up by saying that "we're there to provide the support."

Likewise, Iako explained that it was equally important to help the student to learn and not just to focus on progressing through the materials: "Making sure they do the lesson. But it's not just doing the lesson. It's understanding what they are doing. Then some sort of discipline. It's teaching them how to learn."

Participants revealed that they had to be organized so that they could set up the day's schedule to enable their children to progress efficiently. Uli described that for her younger daughter she set up "...a color coded thing so she knew that when she got the colors done she could play." Other participants described how they organized schedules,

gathered materials and reviewed the instructional guides before their students sat down to work so that they could prepare for an organized day.

Some participants explained that laying ground rules for older students about how much they were expected to progress through the content each week was helpful for keeping students on track. A benefit was that this also gave them a sense of independence. Makai said that his grandson knew that he had to complete one percent of the lessons everyday so he could work “more on his own” and at a pace suitable for himself.

Similarly, Uli said that her eldest daughter knew what she needed to complete each day and that she needed to complete her work by 2:00 p.m. before she could have free time or time for television. Likewise, Wai said that she was responsible for “organizing their lessons everyday so they know what they are supposed to do and setting it up for them.” This enabled her to give her children some independence while she and her husband could run their two businesses from their home.

In summary, keeping students on track was important for helping them to move through the curriculum. It was also a way to give their children opportunities to engage in independent learning.

Setting Expectations for the quality of work produced by their children was reported by participants as an important task. A pattern emerged showing that participants relied on their own experiences and values to set expectations, or measures for quality that went beyond what the K12, Inc. curriculum may have recommended.

Iako described that the expectations she and her husband set were subjective: “...it’s a subjective evaluation made up of the level of work expected in that grade

combined with our knowledge of the personal ability of the child.” She continued, “We know what the child can do and tend to expect the best outcome with each piece of work.”

Like Iako, Wai and her husband set expectations together. Also, like Iako, she reported that some of their expectations at times seemed above those set in the curriculum. Her descriptions showed setting expectations for quality that may have gone beyond those set by the K12, Inc. She described that she and her husband wanted their son to improve his writing because they did not feel that what he was producing met their standards. They enrolled him in some writing classes offered at the Learning Center by one of the teachers. They also offered him feedback on his work and discussed with him what they expected.

Other examples provided by participants showed that they did not just rely on K12, Inc. guidelines to set expectations for quality of work. For instance, even though participants acknowledged that the tests given at the end of the lessons were a way to measure what the student learned, some of them remarked that test scores were not enough so ensure the quality of what their student knew. More importantly, they looked at how their student could apply what they learned to *real life* situations. Most of them considered this ability – to apply what was learned to real life – as a true measure of quality learning. For example, Iako stated, “...it’s not just about the tests!” Aina said that the “tests are markers,” but that they were not the only form of measuring what the student knew. A more detailed discussion on the theme *Real Life* follows.

Participants also described how they would rely on rubrics or guides set up by the student’s teacher as a way to guide their own expectations. For instance, Makai lamented

that writing was not his strong suit and so he looked for "...a rubric the teacher gives him first and then we use past graded papers and my own experience as a guide." Whereas, Uli said that she and her oldest daughter "make a rubric together" so that they are both aware of what is expected.

Setting expectations could prove challenging for some. For example, Aina said showed that when her children did not have her full attention they tended to produce lower quality work – "It feels like the older two are not producing the quality work they had in the past when I didn't have the additional student to work with. They have to spend more time redoing assignments because they rushed through attempting to finish."

In summary, participants seemed to rely on their own experiences and values to set expectations, or measures for quality of work produced by their children. Interestingly, these expectations may have gone beyond what the K12, Inc. curriculum recommended for mastering the subject matter.

Acting as a *guide* was another role that each of the five participants described was one of their main jobs to do as learning coaches. Data suggested that a guide was the one who helped the student through the content, offering him suggestions and examples to make sure the student understood the content. Each of the participants stated that part of the responsibility for being a guide was knowing what the child knew and how he best learned to help him progress through the content successfully. For example, Aina described that it was very important to be "...very aware of their learning styles so you can focus on those things within K12 [curriculum] and how they learn and being able to say take these things to get the joy out of this lesson."

Iako expressed a similar sentiment and added that there was more to getting the student through the lesson: "...so it's not just them doing the rote learning by doing things just for the sake of doing the test but it is also making sure that they understand what is going on." She continued, "this could be done by observing them and seeing what they know and how they can apply it to real life as a way of making sure they understood the content more than just what appears on the surface. She also stated that as a guide it was also her responsibility to teach her children "...how to learn" and was "not just about teaching the content."

In perhaps what seemed like more like a hands-off approach, Wai described that her role as a guide was, "To put their lessons before them [her children], and to make sure they understand what is being asked of them." She added to, "...have them go through the lessons and give supplemental instruction if they don't understand what is being given to them. And then to check the accuracy of their responses to make sure that they've understood the lessons."

In summary, participants seemed united in what they believed were their top three roles as learning coaches. First, they believed that one of their roles was to keep their children on track and moving through the curriculum. Next, they explained that it was their role to set expectations for the quality of work produced by their children. Interestingly, some of the data revealed that the tests given within the K12, Inc. curriculum were not enough to assure participants that their children were learning. They seemed to rely on their own values and experiences as measures for quality. Finally, in their capacity as guides for their children, they explained that it was their responsibility to

not only help the student to work through the content, but also to see to it that they were learning how to learn.

The needs of the children influenced in part the way participants engaged in (were involved in) their roles as learning coaches. For example, one of the interview questions asked each participant to listen to three different descriptions that summarized a parent's involvement in his child's education. The descriptions were based on Litke's (1998) study in which he described parents of students enrolled in a cyber school as (a) absentee, (b) supportive, and (c) participatory. Participants were read only the descriptions assigned to A, B, or C. The actual terms used to describe the involvement were not revealed. They were to choose the letter that they believed best described their role as learning coach:

A: My student typically works on his/her own. I don't really need to be too involved (ABSENTEE)

B: I usually involve myself with my student by ensuring that he/she student fulfills his/her school-related responsibilities. I typically do this by asking him/her questions regarding his/her progress, speaking with his/her teachers or providing him/her with tutorial assistance. (SUPPORTIVE)

C: I think I am quite influential of a student's schooling because I am involved in many aspects of his/her schooling. I provide frequent tutoring. I help my student with editing, checking assignments and providing supervision. (PARTICIPATORY)

A consistent pattern surfaced that showed that participants shifted the type of their involvement primarily based on the needs of each child. For example, Uli and Aina, who both had younger students, identified themselves as being *Participatory* with their

younger daughters, but they reported that they were *Supportive* with their older children. This, they explained was because the younger children needed more assistance and more one-on-one time with them than did their older children. As Uli said "...they [her daughters] are different types of students," and so she adjusted her time with them accordingly. While Aina indicated that she was more *Supportive* when it came to her older two.

With only one student, Makai readily identified himself as Supportive, saying; "I usually involve myself with my student by ensuring that he fulfills his school-related responsibilities. I typically do this by asking him questions regarding his progress, speaking with his teacher or providing him with tutorial assistance when he needs it." This was because his grandson knew "...what he needs more than I do."

Wai had a hard time selecting just one way to identify herself. This was because sometimes she said she was *Supportive* and other times more *Participatory* depending on what the children needed and what the lesson was about. She acknowledged that her son could work more independently usually because he was older. This statement was similar to what Iako and Uli found and was consistent with K12, Inc. curriculum. It has been designed to enable older children to work more independently. It does this progressively so that even younger children are given a few opportunities to work on their own. As they age, the materials become more student-directed and the learning coach can adjust her role to less hands-on.

Adjusting their involvement was also revealed in the way some of the participants described how they dedicated their time to work with their students. Some adjusted their work schedules to meet the needs of their children. For example, Makai reorganized his

full time job so that he worked only on Mondays, Wednesdays and Fridays and left open Tuesdays, Thursdays and Saturdays to work with his grandson.

Altering their business needs to accommodate their children's schooling was challenging for two of the participants who worked full time from their homes. Wai and her spouse juggled their two businesses around their children's schooling, taking on the role of learning coach on alternating days. Similarly, Iako and her husband, who each worked as independent consultants, split the learning coach role by working with their children based on their areas of expertise. Iako was the learning coach for art, history and music, while her husband was the learning coach for math, science and language arts. This enabled them make sure that one of them was always available for the children when the other was focused on work.

On the other hand, Uli and Aina, who did not work full-time, reported adjusting the daily routine to suit the learning preferences of their children. For instance, Uli's eldest daughter was an early riser and loved reading at that time, while her younger daughter needed to complete most of her schoolwork before the lunch hour so that she could rest in the afternoon. Likewise, Aina sorted out their school day schedule so that they could finish just after lunch and before anyone of them got too tired and lost interest.

In summary, participants involved themselves with their child's learning primarily based on the educational needs of their child. However, other factors may also have influenced their involvement, including the age of the student and her ability to work independently, the curriculum and the time participants had available.

The patterns discussed in this section – learning coach *roles* and learning coach *involvement* – were results of how participants tended to the educational needs of their children.

Resources

Another major theme that evolved was the notion of Resources. In order to engage in their role as learning coach participants revealed that they used a variety of resources, including: (a) teachers, (b) technology, (c) themselves (self), (d) the K12, Inc. curriculum, (e) training, (f) family and (g) others. These resources seemed to be relied upon by each participant as a sort of toolbox they used when practicing as a learning coach.

Teachers

When addressing their own roles as learning coaches, participants also were asked to describe what they believed were the top three roles of teachers in this learning environment. They were united in believing that teachers in this school performed three roles: to give the learning coach support with the content and advising on child development skills, to be a tutor for their children, and to help facilitate opportunities for students to socialize and collaborate.

Wai called teachers the “*go-to*” person. This term summed up quite effectively the general perception that participants had of teachers. In her case, she said that the teachers helped her understand whether or not her children were on track and progressing in the right direction. “Teacher’s roles,” she said, “was to be the go-to person if I feel like I could benefit from some more help with guiding one of the students through a difficult

area.” She gave one example “...we did go to their classroom teacher and say are we on track on this? Is the student performing as well as he or she should be?”

Iako expressed a similar sentiment that the teacher was the person who they would turn to when they were not sure whether or not the level at which their child was performing was proficient. For example, when Iako and her husband had concerns about their daughter’s math scores, they had a meeting with her teacher. He helped them to understand that just because a student does exceptionally well in one area (reading in the case of their daughter) does not mean that they will do exceptionally well in all other areas. He informed them that, “...she’s perfectly on track but because she’s so advanced in reading you are probably expecting her to be advanced in math. So she just hasn’t reached the maturity to acquire that content yet so just keep working the same way.”

Similar to Wai and Iako, Makai said that the teacher was the expert he turned to for help with certain content. He reported that the teacher assisted him when he “got stuck” and could not effectively help out his grandson. This, he said, was especially true for language arts, which he felt was his weakest area. He also described how he often used a rubric created by his grandson’s teacher to score his writing.

In addition to turning to the teacher for assistance with content, Uli went to the teachers to help her find better ways to guide her Kindergartner through handwriting. She gave an example of a time when she “couldn’t get through” to her daughter regarding handwriting skills. So she turned to the teacher for advice. She described how the teacher provided her with “...a tool – a cookie sheet, sea salt and food coloring. We made a mini sandbox for my kinder to practice her letter writing. This was just the tool we needed to get her past her writing challenges.”

Information contained on K12, Inc.'s website encouraged learning coaches that teachers were a resource for them, as well as their students. Uli described that the teacher "...would be the professional development [resource] for me."

However, Aina questioned the amount of time the teachers provided to her and her children compared what she had expected that they should do. She did not feel that her children's teacher was as reliable as she hoped. She said, "I feel like I could benefit from some more help with guiding one of the kids through a difficult area." She also wondered "what support is like at other schools and if it's better." She complained that her twins' teacher was not so helpful. She said she wished she would have been told by the teacher of better ways to support her twin daughter, who had some learning challenges with math, and how to work more effectively through the lessons with multiple learners. She lamented, "Am I progressing effectively? How can I do it [progress through content] effectively and not get frustrated because I spent two hours on this math lesson when it could have been let's just move on and if you've spent two hours okay maybe you need to leave it alone and come back to it."

Several other comments from participants also suggested their dissatisfaction with the amount of support or timely feedback they received from teachers. During interviews most of the participants said that they went first to their partners or the Internet for help with content. Uli's comment illustrated this practice: "...we go to Google first!"

Similarly, Makai said that, "...teachers are usually the last source just because it can be difficult to contact them. It can take a couple of days sometimes." Furthermore, some of Wai's comments corroborated Makai's sentiment. She said that her daughter's

teacher was much better than her son's because she was supportive and worked well with the children.

An anonymous comment posted on the open-ended part of the survey reflected the need participants expressed for more support from teachers: "Education material is not the problem. Handling discipline issues is a big challenge and support could be provided."

Interestingly, there was a discrepancy between the frustrations participants expressed during interviews regarding the lack of immediate support from teachers compared with their responses on the survey. Data gathered from the survey showed that all five participants indicated that the teachers were the first resource participants turned to for help with content-related issues. Perhaps the wording of the survey question was too limited and did not capture how participants accessed teachers.

Participants also referred to the teacher as the expert who could *tutor* their children if they needed extra help in any particular area. For Iako, sometimes she had the teacher tutor one of her children in math or writing. Likewise, Wai sent her son to writing sessions given by his teacher to improve his writing skills.

Several of the participants described that the teachers did the testing and proctored the state exams. Iako explained how she relied on the teacher's interpretation of the test results to describe where her children needed extra help: "...then they evaluate or they look at the results and determine if any additional learning needs to be done in certain areas." From here students could get tutoring from their teacher or attend classes in areas where they needed remediation.

Some believed that the role of the teacher was to provide their students with opportunities to *collaborate* in groups, and to socialize. For example, Makai saw the field trips organized by his grandson's teacher as a good way for him to socialize with others. Similarly, Iako appreciated the video production activity her son's teacher had them do because she saw it as an opportunity for him to work with other students. Likewise, Wai saw the teacher's role as an opportunity to supplement the way her student's worked with others in a classroom setting, and to socialize with students of a similar age.

In summary, the teacher played a vital role as an expert for participants. Teachers were relied upon to provide child development type advice for participants and served as tutors for students and facilitators of student collaboration for students. However, participants expressed some frustrations regarding the lack of immediate feedback from teachers. As a result, many turned to the Internet or their partners for certain help.

Technology

Technology was revealed as an important tool used by participants to engage in their role as learning coach. The survey results revealed that four of the five participants relied "heavily" on technology, which they described they "could not educate at home without it." The fifth participant indicated that technology was relied upon "moderately" and that "some type of computer or technology device was used" to educate at home.

Table 5 below illustrates the technologies participants indicated on the survey that they used to engage in educational activities with their children. Mean's (1994) taxonomy was used as a way to categorize the technologies they listed.

Table 5. Technology Usage Categorized by Means Taxonomy of Technology

Technology	Category	% Of Usage
Email	Communicate	100%
Internet	Explore	100%
Videos/DVDs	Explore	80%
Productivity software (e.g. Microsoft Office products)	Tool	80%
Online collaborate tools (e.g. BlackBoard Collaborate™)	Tool, tutor, communicate	80%
Cell phone	Communicate	60%
Social Networking	Communicate	60%
Streamed media	Explore	60%
Wiki technologies	Explore, tool	60%
Educational software (other than that supplied by school)	Tutor	60%
Voice over Internet	Communicate	40%
Broadcast, satellite, cable TV	Explore	40%
Podcasting	Explore	40%
Blogs	Communicate	20%
Instant messaging	Communicate	20%
Message boards	Communicate	20%

The table shows that all five of the participants used email and the Internet and that mostly all of them used videos, DVDs, productivity software and online

collaboration tools to engage in this schooling. The categories helped capture that the technologies were used primarily to communicate and explore.

Email was used by all five participants to communicate with teachers and the school. Data from interviews corroborated the survey results. For instance, several participants described that email was the easiest way to communicate with teachers. Makai said that his grandson frequently used email to reach teachers because he was “confident in communicating with them.”

Participants reported that the Internet was a much-valued resource for exploring content and for getting immediate answers to questions they may not have known. For example, Uli said that “...we go to Google first!” and Aina said it was what they turned to “...look stuff up that we don’t know.” Iako corroborated this sentiment: “If we don’t understand how to do something we look it up on Google.” Makai said that “First, we will try online searches. Then, if that doesn’t work, we have a subscription to Tutor.com.”

During interviews, participants did not elaborate on how they specifically used some of the other forms of technology listed above. However, some of their responses on the survey indicated that they primarily used their computers and the Internet to: (a) perform general administrative functions related to school, (b) access the curriculum, (c) access supplemental educational materials; and to (d) communicate with school staff.

Most of them also used technology to access supplemental educational materials. Only one or two of them used it to network with others, develop curriculum, access local/state/federal resources, or to collaborate for purposes of developing materials.

Data collected from interviews revealed that technology was also another tool that helped participants to reinforce a learned concept. Each one of the participants reported on websites or apps that they had their children use in order to reinforce the concepts they had learned. Some of the more popular sites reported included KhanAcademy.org and DiscoverEducation.com – both of which are websites that provide students with opportunities to practice math, science, language arts, etc.

Iako explained that “video sites such as YouTube and Khan academy were useful in providing visual aspects of [science] concepts,” and this she said was especially helpful when they did not have the materials to engage in hands-on science projects.

Uli said that they preferred YouTube.com, “...because they have a lot of math and science labs that are useful to show.” She added that when they had time they would also use the links embedded within the K12, Inc. online content to help reinforce lessons.

Likewise, Aina reported using YouTube as well as Discovery Education, which she said provided helpful videos relating to content learned in the K12, Inc. online lessons. Interestingly, she was the only one of the participants who reported using K12, Inc. videos for her own training. However, she lamented that the phonics videos she watched began to get too repetitive and so she “...stopped using them after viewing the first few.” She also watched a video on the K12, Inc. website that helped her to better understand how to guide her daughter through the content when her daughter failed to acquire it the first time around.

Makai reported that his grandson often practiced math on his iPad using a variety of math application games. He also said that his grandson liked to use Wolfram Alpha because it was a good way to check some of his answers or to help solve problems he was

stuck on. The site claims that it does not search the web for answers but that it provides answers and solutions by doing dynamic computations. Makai said that even he has used the site to resolve questions or to double-check his work.

Iako and Wai both had their sons involved with the school's First Legos Robotics club as way to let them get hands-on science and technology experience. The club encouraged young students to use math and physics to build robots using Lego materials and a computer application to program the robot's movements. Students could then enter competitions at the local, state and national levels. Their two boys and their school club won their local and state level competitions in 2011.

Interestingly, the two of them also reported that their children viewed technology as a reward and so they would use it encourage their students to complete their work. Wai said that for her children, "...the preferred reward is an app." Iako said that her children got extra time to read on the Kindle as a reward when they accomplished a task.

As described previously, participants revealed that technology was sometimes the preferred resource over the teacher because participants explained that it was immediate and easily accessible. In interviews, diary logs and follow up emails, participants described that technology was often the first resource they turned to for help with content or to give their students enrichment opportunities. They described that they turned to technology because it was immediate and accessible, whereas some of them reported that the teachers were not as readily available. For instance, Makai stated that, "Teachers are usually the last source just because it can be difficult to contact them" and Uli said that "Yeah, we usually don't go to the teacher we go to Google."

Being able to look something up and get an immediate answer seemed to be important for most of the participants. Iako described, “If we don’t understand how to do something we look it up on Google.” Makai said that when they are stuck on a content related issue they first “try online searches,” and he added, “If that doesn’t work we have a subscription to Tutor.com.”

Participants also revealed that they appreciated the flexibility technology afforded them for their learning activities. For instance, Aina described how she took her laptop with her on Mondays so that her daughter could do schoolwork in the library while her son attended an elective course at the Center.

Similarly, Uli explained that because they were on the road so much she bought a wireless card to give her children Internet access when they traveled. She also said that she recently purchased an application that enabled her daughters to access their schoolwork files from a remote computer. To her, it was important to give them access to their materials even when away from home: “The newest thing that we just found out about this software is that they can access their computer from their iPad. So they can be 100 miles away and access their computers.”

Most of them reported that their children used productivity software and tools, like Microsoft^R Word and Microsoft^R PowerPoint, to produce products for school. Uli said that they also have been using mobile Internet access cards to be able to access their schoolwork while they were traveling. And, both Iako and Wai reported that their sons used programming software for their robotics club.

Importantly, some of the participants seemed to be aware of the impact of learning in a tech-heavy school environment. They were aware of the risks associated

with young learners using technologies and tried to be proactive about teaching their children how to be smart technology users. For example, Makai said that he was concerned about the amount of time his grandson spent learning online so he “encourages him to get out of the house and get involved in other activities.”

In another example, Makai, Iako and Uli reported concerns that they had regarding the validity of information their children gathered over the Internet. Iako said that she was beginning to teach her “older one to learn how to judge a website by looking for .org or .gov, which may be more credible.” Uli had been working with her middle schooler to validate website resources.

“You know my oldest now, when I teach her about as far as how to critically think about Internet information, and so we go through this process where I say okay you have to find 10 sources and see if they are similar then you can kind of know you got the right information. But if you get different answers [from these sources] then you have to get different sources.”

Likewise, Makai said that he constantly reminded his grandson that information from wikipedia.com was not necessarily always reliable or valid.

In general, participants seemed to be quite confident using technology. None of them cited any concerns using technology to engage in the schooling. Iako and Makai both expressed that because their jobs required them to use technology they felt very comfortable in this schooling environment. Interestingly, four of the five participants indicated on the survey that when they needed help with technology they turned first to their partners before the teacher or the tech support offered by K12, Inc.

In summary, participants relied “heavily” on technology. Their survey responses indicated that they “could not educate at home without it.” They used it not only to communicate and explore: They also used it to reinforce learning and reward children for work well done. They appreciated the immediate availability of technology to help support their efforts as well as the flexibility it afforded them to engage in schooling anywhere/anytime. However, some of them expressed their concern over young people relying on technologies for learning and a few of them were taking a proactive approach to help their children learn how to be savvy users. They were also confident technology users and turned to their partners for help with tech-related concerns.

Self

For the most part, participants had confidence in their abilities to serve as learning coaches for their children. Most of them did not feel they needed any extra training. For example, Iako said that, “the content at this age was pretty easy” so she and her husband did not seek any additional training. She added, “...we have extensive backgrounds in writing, science, and math and seem to be able to manage on our own.”

This level of confidence resonated throughout the responses provided by the other participants. For instance, Makai felt the same saying that, “I don’t feel it [training] was necessary. I am very comfortable in this environment.” Similarly, Wai explained that she learned the K12, Inc. learning management system on her own, and that neither she nor her husband sought additional training.

Participants indicated on the survey that they were highly educated. Some of them had teaching experience as well. These experiences may have had some positive impact on their level of confidence.

However, some participants revealed that they lacked confidence in certain subject matter areas. For example, three of them shared that they were weak in writing and that they turned to teachers for support in this content area. Aina expressed, “I definitely feel like I lack the expertise in writing.” And that she, “Sure would love a resource like a writing lab of older students who I could submit their [children’s] work to that could be evaluated.” She also said that there were some occasions when she wanted more support and direction from the teachers when it came to how to guide her students through the content or skills, such as math for her older daughter.

Time was one of the biggest challenges faced by participants. Many of them worked full time and so juggling the time between the needs of work and their children proved challenging. As described earlier, most of the participants who worked had to arrange their work schedules so that they could be available for their children. This was a real challenge and made their work days rather long.

Two of the participants explained how the work load for the learning coach could be overwhelming and exhausting because in addition to working with the student, the learning coach spent a considerable amount of time preparing for the lessons, including reading through them and gathering the materials. For example, Aina said, “I often feel overwhelmed and have a never ending to-do list for items to be graded or prepared for.” She continued, “In addition to that, finding time to grade assignments while encouraging

them to continue to work on the same subject or something else until I am able to examine their work,” was difficult for her.

There is also the time needed to log onto the LMS to report on student progress and then the time required to take the child to and from the Learning Center, which could be more than one day per week. This once a week commitment was a new requirement imposed by the school this year. Wai said this caused extra stress for her and her husband while trying to run their two businesses and that “the extra rigors” the school placed on the families became “very frustrating” for them. Iako explained that sometimes they ran out of time during the day to “get to the fun stuff like music and art” because there was so much work to do with the other core content areas. And often, she reported, they were not able to review the external websites provided by K12, Inc. “for the sake of time.” As a result of these time impositions, both Wai and Iako implied that next year they might consider moving their children back into traditional schooling because they simply would not have the time to continue with this form of schooling.

In summary, participants seemed quite confident in their abilities to perform their learning coach roles. However, when it came to certain content areas, such as writing or math, a few of them lacked confidence. They overcame these obstacles by turning to teachers for expert help. Yet, one obstacle they continued to struggle with was amount of time required to serve as a learning coach for their children.

Curriculum

K12, Inc. provides learning coaches instructional guides, teaching tips and other resources to support them as they engage in the content with their children (See Appendix

G). For instance, Uli stated, “my instruction is guided,” which suggested that she relied on the guides provided within the K12, Inc. curriculum to practice her role as learning coach. Uli also exclaimed, “I think I am mostly impressed with the opportunity to see their [her children’s] educational growth.”

Iako and Wai expressed similar sentiments about the quality of the curriculum. Iako found that, “The curriculum is good, well presented and the kids seem to be processing the information without too much trouble.” Likewise, Wai explained that, “...without the curriculum already prepared I would not be able to take on this form of schooling.”

In general, each of the participants valued the way in which the K12, Inc. curriculum suited the academic needs of their students, allowing some of them to work ahead of their grade level and others to take more time on subjects they found troubling. For example, Wai’s two children were working at “a grade level ahead,” and she saw that the benefit of the curriculum they realized was that her children could “...work in a grade level ahead.” She said also, “I think the greatest benefit has been the fact that the children have been able to accelerate through the academics that were too easy for them.”

Similarly, Makai described how the schooling was well suited for his grandson because “he’s more of a loner,” and has been happier working at his own pace. He reported that this school was “...the right environment for him [his grandson] because he can learn at his own pace, little to no pressure, spend time on subjects he needs to and breeze through the lessons that are easy for him.” He happily reported that his grandson had gone from a struggling C-average student when he was in a traditional school to making honor roll the past year and this current school year.

On the other hand, Aina had mixed feelings about the curriculum. It was a good fit for her youngest daughter and older son. However, for her twin daughter who had struggled with some of the subjects, she said, “I am not sure if there would be something else that would make her feel more successful.”

A content analysis of the materials embedded within the K12, Inc. curriculum was conducted in order to better understand the type of support availed learning coaches. Sample lessons accessed from the K12, Inc. website were used as part of this analysis. The review included grades Kindergarten, 1st, 3rd, 5th and 7th (the grade levels of the participant’s children). The subjects reviewed included math, history, science and language arts.

Within each lesson K12, Inc. provided a variety of support mechanisms for learning coaches. Some of these were made available in print form while others were embedded within the online lessons. For instance, the Teaching Tips might have provided the coach with pedagogical strategies for how to scaffold writing for a fourth grader. The Student Help might have shown learning coaches a number of alternative ways to guide a Kindergartner through a math lesson on time by using manipulatives or other readily available strategies. The Optional Activities typically provided hands-on activities that learning coaches can use to help reinforce a concept, such as a science lab where the seventh grade student dissects a frog to better understand anatomy. Appendix G provides descriptions and examples of the various types of support materials contained within the K12, Inc. curriculum.

Most of the participants reported that they did in fact use and rely on these support materials. However, a few of them suggested that some of the support materials

were less complete than others. For example, Aina described that while she did rely on the instructional tips on two occasions she ran into areas where “...the information was not laid out properly for the work they were expecting the student to complete.”

Makai’s statement perhaps accurately sums up the usefulness of the support materials: “They [instructional guides] are a good starting point but they can only help so much. There are always unique situations that the guides and tips can’t cover.”

In summary, participants believed that the K12, Inc. curriculum was of good quality. The curriculum contained a variety of resources to support the learning coach. However, while the participants claimed that they did use the support materials, some found parts of it less useful. They recognized that the materials could only provide so much information and that every learning situation is unique.

Training

K12, Inc. offers its learning coaches a wide variety of training programs online. A content analysis of some of the training programs and other online support offered by K12, Inc. showed that there were multiple opportunities for learning coaches to access training. The K12, Inc. website suggested that the online training sessions provided an opportunity for learning coaches to delve into challenges that arise in online learning settings and to connect to K12 experts for help and advice. Among the many topics offered, several seemed relevant to the areas that participants in this study reported as challenging. For example, there were online courses called, “Overcoming Math Anxiety,” “The First Five Days,” and “Managing Two or More Students.”

Another online resource provided by K12, Inc. is its ThinkTank¹², a blog for its learning coaches. On this web site experts give tips and advice on a variety of subjects. For example, one day the blog had posted tips for the website Diigo.com. It also recommended learning coaches to participate in the upcoming Digital Learning Day. There were also a few blogs profiling students in K12 schools.

BigThink¹² was another K12, Inc. online resource. It was billed as a social networking tool for learning coaches. This K12, Inc. site was a place where parents, teachers and students could share information and ideas. The site contained resources, message boards, new feeds, blogs, etc., within K12, Inc.'s proprietary system. There was a Parent's Lounge area, which was an online community available for learning coaches to link them with mentors and to provide a place for parents to share their learning coach experiences, information and advice.

Interestingly, only one of the participants reported that they used any of these online resources. Aina was the only one of the participants who said that she had watched some of the instructional videos supplied by K12, Inc. The videos covered how to teach phonics and one video she watched online was about helping children master the content. She reported that this video was very useful to her because it helped her to understand that it was okay to let your child make mistakes and that learning by making mistakes was a good lesson in itself. She also said she would have liked to have had more training and that she "would be open if there were some others [courses]" but that she just did not have the time. Additionally, she lamented that even though K12, Inc. offered courses online for learning coaches the "last thing I feel like doing is sitting at the computer" after working with her students all day on the computer.

Uli's comments corroborated Aina's sentiment regarding the lack of time, plus she added that most of the online training offered to learning coaches by K12, Inc. was not offered at a time convenient for those living in Hawai'i. Uli furthered explained that she did not feel that the training K12, Inc. offered to learning coaches was of the type or quality suitable for her needs. She remarked that they "talk down" to learning coaches "like they can't take the information," and that she did not consider herself "...as a person who needs remedial information."

A few of the participants took the HTA parent orientation program to find out more about the K12, Inc online learning system and processes of the school. Uli was actually one of the trainers for this program as she had several years experience with the school. She was also able to attend some of the training K12, Inc. provided to its teachers and said that the pedagogical methods she learned from those courses were helpful.

The participants also reported that they did not attend any other learning coach-related training. However, several of the participants had taken or were currently taking continuing education or higher education courses for their own purposes.

In summary, K12, Inc provides ample training and a number of online support blogs and networks geared to support learning coaches. However, none of the participants used any of these resources. Several did attend a new parent orientation training program provided by HTA and one of them viewed a few of the instructional videos that come packaged with the student materials. This was due mostly because participants said they did not have time to use these resources and/or that they did not feel they needed to rely on them. This last sentiment seemed consistent with their level of self-confidence. One

participant said that the training was remedial and that the teacher training would be more relevant for the learning coaches.

Family

Four of the participants shared how they relied on their spouses to help with the responsibilities of learning coaching, or just to provide some moral support.

Their interviews were corroborated with data collected from the survey that indicated that four of them turned to their partners for help with technology related concerns.

Wai shared that her weakness was in writing and for that reason her husband stepped in to guide the children through their writing lessons: “When it comes to the overall putting the sentence structure together in cohesive thought he’s much better at that.” In one project that required Wai’s son to develop a list of ideas for a robotics competition she stated that it became a family project where they all “brainstormed ideas for the research project.”

Iako’s husband tended to work with the children on most of the core subjects while she guided them through art, music and history. However, she noted that “if he has a conference call or he’s busy then I can take over and follow. But we talk all the time. We know where the kids are at.”

Likewise, Aina reported that her husband stepped in to help when there were hands-on type projects and Uli’s husband covered for her on the occasions when she had out-of-town meetings. On the other hand, Makai did not report that he relied on a partner.

Several of them described how this schooling was a family affair. For instance, some described how lessons would be discussed at the dinner table or during family road

trips, engaging the entire family in a conversation about what was learned. A few reported that this could happen because the learning coach and partner were in tune with the children's learning so those types of conversations were easy to have.

Iako described some occasions where she engaged both her children in art or music lessons. She also described times when together they would bake something, practicing their math concepts. Iako gave an example of one of her son's science projects that became a family affair. He had to produce a video concerning gravity and his family joined in to help him brainstorm the content and to lend a hand filming and setting up props. His father helped him to edit and upload the final project. She said this was one of his favorite projects and she liked it because it gave him a chance to show what he knew using technology, his preferred tool for learning.

The children also were reported as helping with lessons too. For instance, Aina occasionally had her son help his twin sister on math and Wai turned to her son to help with computer related questions.

This pattern, family affair, was also a benefit reported by several participants and one that some felt they did not experience while their children were enrolled in traditional schools.

In summary, family members played an active role in the education of the children. They were relied upon for their expertise and some of them shared responsibilities for the learning coach duties. Even children played an active role in their own education.

Others

The term “others” refers to the way in which participants relied on non-family members to support their children’s education as well as their own learning coach endeavors.

Participants revealed that when possible they looked for opportunities to engage their children in group work or social settings, where they could socialize and collaborate with others.

Some described that HTA’s Learning Center was a good place for student socialization and collaboration. For example, Wai and Iako, who both had their sons enrolled in the school’s robotics clubs, saw the club as an excellent way to give their sons experiences working with others. Similarly, Makai appreciated the socialization his grandson engaged in when he attended the Learning Center and he was especially appreciative of the collaborative activities his grandson did in his Hawaii Studies classes at the Center.

Data from the survey revealed that all of them had their children enrolled in a variety of clubs outside of school, such as sports clubs, arts and crafts clubs, chess clubs, etc. Participants also described the importance of giving their children opportunities to play with other children and so many of them purposefully arranged play dates. For instance, Wai described that for her daughter socialization was a very important activity and so play dates were an important part of her learning activities and Iako described that play dates were actually a way to reward her children when they completed schoolwork.

Uli described how she believed that socialization “starts in the home,” because, she continued, “when it does start with peers that is when you have problems because it

doesn't start with experienced individuals.” This last statement showed how some participants took seriously the aspect of socialization as an important part of the student's learning.

Conversely, none of the participants reported being involved with groups themselves. Some reported that this was typically because they did not have the time to be able to participate in these groups. However, it might also have been because they did not find the need for this type of support – either because they felt the curriculum provided enough support, or because they were confident in their abilities. For instance, Iako suggested that if they did not “...use a program as comprehensive as K12, we might rely on more group exchanges.”

Uli suggested that because this program was really a “personal experience,” and that it encouraged the entire family to be involved in the learning. She said that “...outside groups were more a hindrance.”

Aina said that because most groups were online she did not have the desire to participate: “After being on the computer all day long the last thing I want to do is get on the computer again.”

In summary, participants reported that they relied heavily on others to provide their children with socialization opportunities and that they appreciated the collaboration activities their children could engage in at the Center. However, they themselves did not participate in groups related to learning coaches. This could have been attributed to several factors, such as the lack of perceived time and lack of need to participate in support groups related to their learning coach endeavors. This practice was consistent

with data collected from the survey which showed that only two of them used technology to network with others.

The patterns which formed this major theme, Resources, included the tools participants used or relied on to support and engage in their role as learning coaches. These “tools,” might include people, technologies and other materials. Some of the “tools” were relied on more than others and some were seen as necessary or desirable, but perhaps at times frustratingly inaccessible.

Real Life

The third major theme that emerged was the concept “real life.” The data revealed that when participants interacted with their children they often used examples from their own realities or materials found in their daily lives. They would use these resources to help *reinforce* and *validate* what the child was learning. They might also use real life examples to *model* how to learn or prioritize schoolwork.

Reinforcing

The concept *Real Life* came up numerous times as participants described how they would rely on materials or examples from *real life* to help reinforce what their children were learning. Reinforcement was their opportunity to make sure that their students understood a particular concept and how that concept could be applied to real life. For example, when Uli and her children went to the beach one day they reflected upon a recent science lesson pertaining to simple forms of animal life. When they happened upon a sea cucumber Uli exclaimed that they naturally engaged in a conversation about the creature comparing what they noticed about it to what her eldest

daughter had recently learned in a science lesson. She intimated that this real life environment played an important role in providing tangible examples of the lessons her daughters were learning.

In a similar example that took place outside the home, Wai described that, "...we do a lot of hiking so as a family when we are together we talk about those things [science] and we try to bring into real life something that relates to what they've learned." Likewise, Makai reported that occasionally after his student takes a test he will ask him, "So how does this apply to your life?"

In an example of using real life experiences at home to reinforce learned concepts, Iako described how she often used cooking as a way to reinforce math concepts in real life settings. She explained that, "We try to relate things they are learning with real life things. So let's say we are working on fractions we'll go and have a piece of cake and it's like alright we have four people, what is the fraction? You know I want to split my recipe in half or I want to double it. How much do I need? I want to make twice the number of pancakes. Let's figure this one out."

Iako's diary account of an art lesson regarding colors illustrated how she was guiding her daughter through the content and helping her to reflect on things the child could associate with in her immediate environment to help solidify her understanding of the content.

"...we read through the text together and discussed what it meant. One of the topics was primary and intermediate colors and how you mix them together to form new colors. We then looked at different items around the room and I asked

my daughter what she would mix to obtain those colors. We used paint to experiment with mixing of colors and the addition of black and white.”

Likewise, Aina described how the family’s events calendar served as a good way to help her younger child understand the concept of estimated time and dates. This, she described, was because she was familiar with the calendar and how the family used it to manage their life events and Aina knew her daughter would be able to easily relate time to a more personalized concept.

Uli’s statement that “it [learning] doesn’t have to be separated from daily life” illustrated how participants perceived the importance of how using everyday materials or engaging with the environment. They saw these opportunities as a way that could help the children connect what they have learned with real life.

Iako expressed a similar sentiment and added that there was more to getting the student through the lesson, “...so it’s not just them doing the rote learning by doing things just for the sake of doing the test but it is also making sure that they understand what is going on.” She continued, “This could be done by observing them and seeing what they know and how they can apply it to real life” as a way of making sure they understood the content more than just what appears on the surface

In summary, most of the participants considered their child’s ability to apply the learned concept to a real life scenario as an important step to knowing that they “got it.” They used examples from everyday life, at home or outside the home, to help their children connect to the lessons. Participants perceived their ability to bring lessons to life using real life concepts as beneficial and as an experience unique to being so intrinsically involved in their children’s learning.

Validating

Even though participants acknowledged that the tests given at the end of the lessons were a way to measure what the student learned, some of them remarked that test scores were not enough so ensure the quality of what their student knew. More importantly, they looked to how their student could apply what they learned to *real life* situations. Most of them considered this ability – to apply what was learned to real life – as a true measure of quality learning. For example, Iako stated that “...it’s not just about the tests!” Similarly, Aina said that the “tests are markers,” but that they were not the only form of measuring what the student knew. She said she was assured that they were learning when they related concepts from lesson to simple daily, non-school related activities.

Furthermore, most of the participants described scenarios where they had their student engage in a real-life situations to demonstrate what was learned. For instance, Iako described how she asked her son to double measurements for a cake recipe they were making to see what he knew from the lessons on fractions. Aina described how she had her son teach his twin sister a particular math concept that he had completed well before. Uli said that being able to engage her daughter in conversations about the lessons beyond “school time” was a practice she engaged in regularly. Likewise, Makai said he would ask his grandson how “would he apply this to real life” to ensure he got the essence of a particular concept beyond the lesson.

Participants found it beneficial when their children could express what they learned from a lesson when they were in an environment outside of their study time. For instance, Wai found it important that her son had to present what he had learned about

robotics in a public forum, where he could practice his public speaking skills to share what he learned with others. Aina and Uli found it fulfilling that on their daily travels their children would discuss concepts they had learned as they related what they were observing in real life – in stores, natural settings and just driving around.

In summary, most of the participants found a child's ability to apply what he learned from a lesson to a real life situation more validating than what test scores he may have received. They found that because they were in-tune with what their children were learning they were able to help the child express what he learned in real life terms.

The patterns that emerged to support this major theme, Real Life, involved the concept of using real life examples to measure or validate whether or not a participant believed his children understood the content. Real Life also included how the learning coach reinforced his student's learning or modeled good learning practices for his children. In general, participants tended to believe that their children "got it," meaning they truly understood a concept, when they could connect a lesson to a real life example.

Modeling

When participants described how they modeled learning for their students they tended to give examples of how they themselves engaged in reading, taking classes, using the Internet to conduct research, or working. Interestingly, when participants were asked how they model learning for their students they hesitated to reply. This may have been because they did not intentionally model learning. However, they gave a number of examples of activities they practiced that seemed to model good learning.

For instance, a number of them referred to modeling the love of reading as a positive way to encourage their children to do more reading. Iako said, “We’re always reading so the children see that.” She added that they wanted to make sure their children saw reading as joyful and not a chore. Likewise, Wai reported that she and her husband read a lot and that the children were aware of this and had begun to read more independently without having to be reminded.

Several of the participants had taken or were currently taking continuing education or higher education courses. They described their commitments to continued learning and their homework practices as ways for modeling learning skills for their children. For instance, Aina said that “My husband and I have either both taken classes or taught classes and they’ve [the children] seen us studying and taking notes, and reading and trying to prepare either before class or doing our homework after class.” She saw this as beneficial for the children because it showed them that learning should be a life long activity and should be “joyful.”

Almost every one of the participants gave an example of how they modeled using the Internet to look up information to solve a problem. They saw this as an important way to help their children understand how to be resourceful using the Internet. Wai was proud that her children were becoming more independent at looking up things on their own. Aina gave an example of a time her husband and her children used the Internet to look up how to make a bike rack using plastic pipes. She recalled that together they looked up the information, printed out an instructional guide and referred back to the web site as they constructed the bike rack.

On the other hand, Makai, reported that he had to talk with his grandson on a number of occasions to help him understand that Wikipedia could not always be counted on to provide valid information. Similarly, both Iako and Uli described how they were trying to teach their older children how to evaluate websites for validity.

Modeling work ethics seemed to be a pattern that resonated with several participants. Iako described that, “The other thing about it [modeling], is not necessarily about learning but about working. I work from home. They see that I am a teacher and that I have to mark assignments and to develop lessons.” She also added that she reminded her students that she did not have a boss to look over her shoulder and so she had to be disciplined – “I don’t have a boss. I don’t have some body telling me what to do every minute. I have my responsibilities. I say you know what guys I have to finish this then I can move onto something else. So hopefully they understand this concept.”

In summary, participants believed that they modeled good learning practices when they themselves engaged in reading, taking classes and working diligently. None of them responded that they intentionally modeled learning. Rather, the concept of modeling was something they reflected on in everyday situations.

Summary

The purpose of this chapter was to present the results gathered from the findings of this study. Topics included a review of the participants involved and the setting in which the study took place as well as the three major themes that emerged from the data.

There were five participants in this study. They each served as learning coaches for their children enrolled in the Hawaii Technology Academy, a cyber charter school.

They were all highly educated and some had teaching experiences. At the time this study was conducted, most of them had almost two years experience as a learning coach. There were four female participants and one male participant. The male participant was the learning coach for his grandson. Two of the female learning coaches had two children, while the other two had three children.

The children of the participants in this study were in grades Kindergarten to 7th grade. Overall, participants described their children as doing well academically, except for one child who was described as struggling through some of the math concepts.

In partnership with K12, Inc., the school was able to provide the learning coaches with the online content and offline materials necessary for attending this cyber charter school. The school also provided certified public school teachers for its students and had a Learning Center where students could attend classes and engage in school-related activities. The school, still younger than five years, faced growing pangs. There were some internal management challenges and in 2011 it failed to meet the Overall Adequate Yearly Progress mandated by NCLB. However, this did not seem to impact the participants or their students.

There were three important themes which emerged naturally from the data collected from participants. They included: *Learner Centric*, *Resources* and *Real Life*.

The first theme, *Learner centric*, referred to the way in which participants demonstrated how they supported their children's learning. By being keenly aware of their children's needs the participants revealed that, on a daily basis, they could customize the educational experiences to suit their children's needs. Additionally, the way participants supported their children's needs tended to be based upon how they

perceived their roles as learning coaches and how they involved themselves to serve the educational needs of their children.

The second theme, *Resources*, referred to a palette of resources that contained tools participants relied on to support their role as learning coaches. These *tools* included teachers, technology, curriculum, training, self, family and others. Some of the tools were relied on more than others and some were seen as necessary or desirable, but perhaps at times frustratingly inaccessible.

The third theme, *Real Life*, was the concept of using real life examples to measure or validate whether or not a participant believed his children understood the content. It also included how a participant reinforced his student's learning or modeled good learning practices. In general, participants tended to believe that their children "got it," meaning they truly understood a concept, when they could connect a lesson to a real life example.

In the next chapter I will present a discussion of these findings by using the results to answer the four research questions that comprise this study. I will then offer concluding remarks and recommendations for future research.

CHAPTER 5: CONCLUSIONS

What, does it all mean?

(Max Adolph Hasler, 1927 – 1992)

Overview

Even though school bells did not ring to officially start or end the day for the cyber charter students in this study, it was evident that their learning coaches tended to student learning throughout the day. But what do we make of *how* they tended to student learning? And, what can we learn from them that may help us to better understand what it means to be a learning coach for cyber charter students?

The purpose of this study was to explore the behaviors and beliefs of learning coaches who provided educational support for their children enrolled in a cyber charter school. The objectives of this study were (a) to better understand the breadth, depth and manner of educational support these learning coaches provided their children and (b) how they received support themselves for their endeavors. The perceptions and descriptions of the five learning coaches involved in this study were captured and explored. Their accounts have helped shed light on what is involved to be a learning coach and what unique opportunities and challenges may arise when supporting children who are enrolled in cyber charter schools.

This exploratory case study employed a variety of qualitative data collection techniques in order to capture a phenomenon that has not been fully explored. Ultimately, this study was able to provide examples of the types of experiences learning coaches

undergo and the challenges they face. These examples offer a deeper view of the complexities of parental involvement in their children's education.

Learning coaches play a central role in educating their cyber charter school children (Ash, 2010; Bogden, 2003; Connections Academy, 2011; Davis & Niederhauser, 2007; K12, Inc., 2011; Revenaugh, 2005; Vergari, 2009). To make informed decisions about cyber charter schooling it is incumbent upon policy-makers, those in education and the general public to better understand the type of support learning coaches provide their children and the challenges they face. Knowing these important aspects may help guide policy and practices in cyber charter schooling. This study has added to the existing literature a body of knowledge concerning learning coaches, who until now have been relatively understudied.

To collect the data I used a semi-structured interview guide, conducted online focus groups and an online survey, collected electronic diary logs and engaged in follow up emails with the learning coaches. The data were analyzed using methods suited for a grounded theory study, including constant-comparison analysis and triangulation. I approached this research through an interpretivist lens because I wanted to achieve a deeper understanding of the study's learning coaches and how their own realities influenced their behaviors. As such, throughout the results I used direct quotes from the learning coaches to help elucidate their own experiences and beliefs.

The data were analyzed through a systematic process of coding-patterning-refining-comparing and triangulating findings across all data sources and in between. Eventually, three major themes emerged from the data. These themes were not drawn from the existing literature. However, a conceptual framework layered with existing

literature on parental involvement in their children's education helped to ensure that a more holistic approach was taken into account when collecting and analyzing the data. Furthermore, leaning to the conceptual framework and the existing literature proved useful when preparing the discussion, conclusion and recommendations for this study because they formed the foundation from which to validate or refute what is already known about parental involvement in their children's education.

This chapter discusses the research findings described in the previous chapter. The goal was to determine the similarities that support the existing literature and to identify any differences that may provide more in depth knowledge which could better inform the practices of cyber charter schooling. Reflecting the findings alongside the literature is an important practice to ensure that major themes were not disregarded and to add to the validity of the findings.

The four research questions that comprise this study were used as a framework for the discussion. In general, several important results surfaced from this study which should be addressed in order to provide the educational community with an informed picture of how learning coaches support their own cyber schooled children. First of all, the four behaviors of parental involvement found in the existing research did not sufficiently capture other more subtle and complex behaviors associated with parents providing support to their children in cyber charter schools. Secondly, the learner centric environment these learning coaches created is worth examining further, especially as it relates to personalized learning and other educational reforms some consider effective for providing more meaningful education for students. Thirdly, the existing literature did not sufficiently address the challenges faced by these learning coaches. Finally, the

challenges faced by the learning coaches, along with the recent problems experienced at a number of cyber charters, may indicate that there are deficiencies within the system that warrant deeper investigation.

Discussion

It has been a long held belief that children benefit academically when their parents are involved. Studies have shown this to be true for students in traditional and virtual schools (Baumrind, 1971; Black, 2009; Dornbusch, et al., 1987; Eccles & Harold, 1993; Epstein, 1986, 1995; Jeynes, 2010; Lareau, 2011; Lareau & Horvat, 1999; Liu, et al., 2010; Sui-Chu & Willms, 1996; Zellman & Waterman, 1998). However, there has been little exploration of the quality, breath and depth of parental involvement in cyber charter schools. Additionally, concerns over just how much parents are involved in their children's education at cyber charter schools and how effective they are at supporting their students' educational endeavors supplicate deeper research. To address these concerns I focused my study around four research questions:

RQ1: How do learning coaches support their students?

RQ2: How do they perceive their roles?

RQ3: How do they use technology to support their students?

RQ4: What challenges do they face?

As this was an exploratory study, I set out to answer these questions in the most holistic manner possible. I relied on Bronfenbrenner's Ecological Systems Theory (1986, 1994) as a framework to help capture a broad picture of those aspects most likely to form the answers to each of the research questions. Using the Ecological Systems Theory as a

foundation, I layered this framework with findings from the existing research on parental involvement in their children's education over the framework to devise categories from which I could investigate.

Figure 5 represents the original framework developed for this study. It situates the mechanisms of parental involvement from the HDS Model (2005a; 2005b) in the center of the framework as they represented the research questions fundamental to this study. Surrounding the central concepts are variables concerning parental involvement associated with traditional, virtual, home and cyber charter schooling. Together, these variables form the five nested structures defined in the theory.

Conceptual Framework

Behaviors of Learning Coaches and Possible Influences

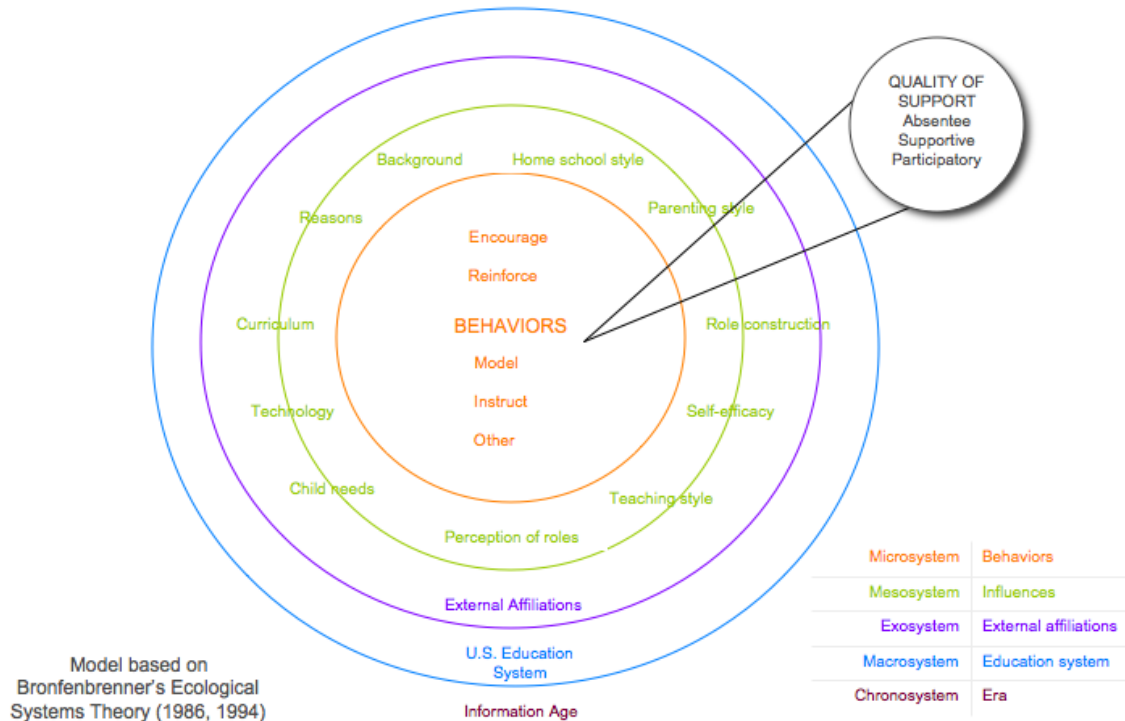


Figure 1. Conceptual Framework. Framework based on Bronfenbrenner's (1986, 1994) Ecological Systems Theory as well as literature concerning parental involvement in children's education.

The large circle in the center of the diagram, the Microsystem, represents the four core mechanisms of parental involvement per the HDS model. There is also the term, "other" which represents any additional things or behaviors learning coaches engage in to support their students. The first ring proximate to the center of the circle comprises factors that could be found within the Mesosystem. These may represent influences on parental support and involvement. The second ring contains elements which might be found in the Exosystem, including external affiliations such as social, religious or other

groups that the parent belonged to and which might have indirectly influenced his interactions with his children. The outer area of the diagram comprises the Chronosystem, which reflects the Information Age. It represents the chronological period in which this study is taking place and which shapes the very nature of the educational environment in which this case is situated, the cyber charter school. The circle extending from the center of the diagram represents the type or quality of support given by parents to their children. It includes the themes found in Litke's (1998) study, including the absentee, supportive and participatory parent.

As a result of the data analysis I learned that this model did not fully represent the findings of this study and required some adjustments. The framework was revised to take into account the (a) learner centric focus learning coaches exhibited, (b) two additional behaviors in which learning coaches engaged, (c) influences central to the learning coaches and (d) the quality of support provided by the learning coaches to their students.

The discussion that follows elaborates on each of these layers and is used to respond to the four research questions that form the basis of this study.

Research Question One: Support

The essence of how learning coaches supported their students rested in the way they acted to provide a learner centric environment. I choose the term "learner centric" to represent this central force because its definition best fits what I found in the data.

Learner centric refers to how the interests, needs, abilities and preferred learning style(s) of the student are met (Cory-Wright, 2011). Learner centric places the learner at the absolute center of the learning activities. It is similar in concept to Christiansen, et al.'s

(2008) student-centric approach, in that it relates to customizing the curriculum to meet the learning needs of the child, but it is far more holistic in that it also represents a child's needs other than just learning needs. For example, it might include a child's particular emotional needs, his moods or particular interests.

A learner centric environment is also similar in concept to a personalized learning environment, a concept some educational reformers have touted as a way to make learning more meaningful for students (Gilbert, 2006; Robinson & Aronica, 2009; Toshalis & Nakkula, 2012; Verpoorten, Glahn, Kravcik, Ternier, & Specht, 2009). In a personalized learning environment teaching and learning are adjusted to meet needs of the learner based on student data concerning academic performance.

While the term learner centric and personalized learning share similarities, learner centric is used as a descriptor in this study because it focuses not on how the school makes learning personal, but rather on how the individual student is tended to. Further, personalized learning is associated with how learning is carried out in schools that serve groups of students, whereas learner centric, in the context of this study, is concerned with the individual, wherever she is located. Additionally, learner centric is not tied to student data: Instead teaching and learning are adjusted based mainly on what the learning coach knows and observes of the student and feedback provided by the student herself.

Learning coaches provided a learner centric environment because they wanted to afford a truly individualized learning opportunity for their children where they could learn at their own pace, and importantly, where they could connect what they were learning to their everyday lives. To do this, learning coaches revealed that they needed to be acutely aware of their children's learning styles, learning preferences, interests and

their moods. They also had the advantage of knowing their children intimately so that they could anticipate their moods or their interests and make adjustments accordingly. This practice typified what Cai, et al., (2002) found among home school parents who intimately knew their children's interests and needs and could customize the learning each day.

Overall, it was their children's needs that seemed to drive the way learning coaches supported their students. They paralleled home school practitioners by creating a "spotlight-like focus on being aware of and meeting a wide range of student needs in a timely fashion" (Cai, et al., 2002, p. 373).

Learning coaches also had to recognize what their children already knew and how much their children needed to progress to meet the demands of the curriculum. They were able to do this because they regularly engaged their children in dialog, carefully observed how their children worked and made opportunities for their children to optimize their learning experiences. Lareau (2011) referred to this type of practice as "concerted cultivation," a custom engaged in by parents who actively foster and develop their children's talents and who successfully help their students navigate the education system.

As a result of their awareness, they could tend to their children's needs by adapting their own behaviors. Some of the more frequently practiced behaviors they engaged in included the four mechanisms of behaviors described in the HDS model, and also included two others that had not been described in the existing literature. These two additional behaviors included how learning coaches *adapted* to suit the needs of their children and *leveraged* resources to support student learning. It could be that these two additional practices emerged from these learning coaches because they had a lot more

responsibility for their children's education than might be found in traditional school settings.

Learning coaches encouraged learning to permeate throughout their children's day-to-day activities. From their daily routines at home to their travel adventures afar, learning coaches seemed to be on the lookout for teachable moments. They engaged their children in dialog and encouraged other family members to participate in the conversations that centered around what the children were learning.

Data captured in this study provided a more complete picture of what these behaviors looked like when learning coaches actualized them. Table 6 provides a snapshot of the patterns that emerged from the data collected on learning coach behaviors. It is organized into what Strauss and Corbin (1998) referred to as dimensionalized examples – that is examples shown along a continuum that offer clarity and deepen our understanding of a relevant theme (category) or pattern (property). Column A includes the four HDS model of parental behaviors along with the two additional behaviors which emerged from the data in this study. Column B describes the patterns that surfaced from the data and Column C includes dimensionalized examples of the behaviors they engaged in which are revealed along a spectrum.

Encouraging

Hoover-Dempsey and Sandler defined encouragement as parent's explicit affective support for engaging their children in school or learning related activities. The scales used in their study to measure this domain reflected statements such as, "We encourage this child when he or she has trouble doing school work" (2005b, p. 90). The idea being that when a child was encouraged to persist at a task he was more likely to succeed in school. Later, Liu, et al's, (2010) study concerning parental involvement in virtual schools suggested that parental *encouragement* could be important for students who are motivated by the immediacy of face-to-face interaction, and Borup's (2012) study on parent-student interactions in an online charter school revealed that students valued their parents interaction and considered them motivational.

Data collected from learning coaches in this study revealed examples that seemed aligned to the findings in studies by Liu, et al (2010) and Borup (2012). For them, encouraging students was mainly a way to keep students motivated or as a way to praise them for a job well done, whereas the HDS Model described encouraging when a parent helped a child to persist. Importantly, learning coaches were keen on exactly what motivated their students and could use this to their advantage. They could adjust motivational techniques as often as their children's moods shifted or modify incentives to suit their children's evolving interests. However, keeping students motivated did not come without the occasional challenge. Learning coaches revealed that wearing two hats, as teacher and parent, and trying to discipline students to keep them motivated could be frustrating. Several suggested that support from the school was needed. Perhaps the

school could have provided more resources for learning coaches on how to overcome these obstacles.

Reinforcing

Hoover-Dempsey and Sandler described reinforcement as the behavior parents do to help develop and maintain student attributes associated with positive learning outcomes. It was exemplified in their scales of measurement by the following statement: “We show this child we like it when he or she organizes his or her schoolwork” (2005b, p. 94). Liu, et al., (2010) proposed that parental reinforcement could help students establish good learning habits when schooling online. Additionally, they recommended that parents could be important role models who inspire students to persist in an online environment.

Data from learning coaches indicated a different interpretation for the term *reinforcement* than that provided by the HDS Model or Liu, et al’s (2010) study. Their feedback illustrated that reinforcement was not necessarily related to giving their students positive feedback – since most of them described that within the concept of encouragement. Rather, for them, reinforcement was the opportunity to make sure that their students understood a particular concept and understood how that concept could be applied to *real life*. This act, applying a learned concept to real life, presented an opportunity for the learning coaches to validate what the student had learned. They believed that when their children made a connection between what they learned in a lesson to an everyday situation that they indeed “got it,” or understood the content. Several of them pointed out that while the tests were indicators of how well a student

learned a particular concept, their ability to apply it to real life was more important.

While their approach may seem informal it resembles the term *authentic assessment*, a formalized way to assess students where they perform real-world tasks that demonstrate meaningful application of skills and knowledge learned (Mueller, 2012; Newmann & Wehlage, 1993; Wiggins, 2006).

Learning coaches often tried to find opportunities where they could optimize their children's learning experiences by enabling them to connect a lesson to their own realities. They could adjust what they were doing and put into play an activity related to the lesson, engage in a conversation about a topic the child was learning, or react to a situation that presented itself as a learning opportunity. In ways, this learner centric-practice seemed to resemble the concept of personalized learning, which "emphasizes the notion that learners consider given settings for learning as personally relevant" (Verpoorten, Glahn, Kravcik, Ternier, & Specht, 2009, p. 52).

Interestingly, reinforcement was not reported as a planned or formal event. It tended to occur spontaneously and this was made possible by the fact that the learning coaches, their children and other family members were aware of what the children were learning. This seemed to enable them to seize a teachable moment when it occurred.

Another way learning coaches reinforced a lesson was by finding opportunities to validate whether or not their children "got" the lesson. They tended to do this by measuring how their children applied a learned concept to a real life situation. They regarded the tests as "markers," but valued the real life connections their children made and considered them more revealing of what the children had learned. This sentiment calls attention to the type of testing being promoted within the system and may warrant

deeper consideration of what type of assessments could be most effective for determining what students have learned and it may also suggest that learning coaches be provided with training to implement more formalized, authentic assessment strategies.

Modeling

Hoover-Dempsey and Sandler (2005a) described modeling as the learning students can derive from parents when they observe them. They emphasized that modeling was especially effective when undertaken by adults and particularly by a child's parents. They used the following statement as an example of modeling: "We show this child we know how to solve problems" (2005b, p. 92). Later Liu, et al. (2010) suggested, that modeling could play an important role in motivating students to be responsible for their learning online and to persevere in an environment devoid of face-to-face interaction with a teacher.

Similar to what the HDS Model suggested, learning coaches in this study felt that it was their responsibility to help their children learn how to learn. They reported some instances of modeling, such as when they themselves read to demonstrate the importance of setting aside quiet time to read. They also explained how they modeled being resourceful by using the Internet to locate information that might have been needed to clarify a concept. Some emphasized that when they conducted searches, they tried to also help their children understand how to validate online resources and not to use them blindly. Learning coaches also provided examples which showed that for them modeling was about helping the children to develop work ethics and was about how learning should

be joyful and ongoing. Overall, it seemed as if modeling was about life's daily lessons and enacting family values.

There was not enough data to show much more about how learning coaches modeled learning strategies that might be akin to how teachers model learning. For instance, teachers in more progressive classroom settings often model strategies and knowledge-making in the context of completing a task (Brown, Collins, & Duguid, 1989; Vervoorn & van Haren, 2012). Vygotsky (1978) suggested that teachers model by doing complex tasks that are meaningful to the students and that they allow the students to help out as much as they can. Eventually, with repetition, the child can engage in the tasks on his own.

While learning coaches did not seem to intentionally practice modeling, it was evident that they saw themselves as role models for the way their children prioritized schooling and work ethics.

Helping learning coaches understand the benefits of modeling to aid learning may prove beneficial as another effective way to guide student learning.

Instructing

Hoover-Dempsey and Sandler defined "instruction" as that behavior which emerged in social interactions between the child and the parent as they engaged in shared thinking activities related to learning strategies, processes and outcomes. They used statements such as the following to illustrate this behavior: "We teach this child how to ask questions when he or she doesn't understand something" (2005b, p. 96). Liu, et al., (2010) contended that this behavior could help students gain effective online learning

strategies and might be especially important for virtual schooling because of the lack of physical presence of teachers.

Data collected from learning coaches in this study revealed that the learning coaches practiced some instructional behaviors similar to the HDS definition, such as by engaging in shared thinking activities with their children. More often, they engaged in dialog with their students to exchange ideas and to gauge how well their student knew the content. They would adjust the way they guided the student based in part on the outcome of the conversation and the demands of the lesson. Other times, they observed their children's work and study behaviors and guided them accordingly. Sometimes, the learning coaches described that they were more like a guide on the side where they helped their children better understand the lesson's instructions and stepped in when called upon by the student. These and other practices they engaged in might have resembled constructivist-type teaching practices. Constructivist teaching practices typically involve scaffolding, where the teacher acts as a guide to help the child learn by doing, and by building on skill or knowledge in a stepped process (Vervoorn & van Haren, 2012). It is also child-centered and usually involves experienced based learning activities (Brooks & Brooks, 1993).

It seems reasonable to assume that the learning coaches may have engaged in other types of instructional practices. However, there was not enough data to show how else they instructed their children. It was apparent that the learning coaches did not seem to be practicing a formalized approach to instruction. Rather, they would rely on parts of the curriculum guides, their own experiences or a combination of both that they believed would be best suited for the child. At times, it seemed that how they guided the student

depended on the lesson and what they knew the student was capable of doing on his own. In this sense, their instructional practices seemed to be instinctual, rather than intentional, formalized or grounded in pedagogical theory. Whereas a teacher might intentionally follow, for example, a content-focused approach emphasizing mastery of a particular math rule or concept (Anthony & Walshaw, 2009), the learning coaches relied on what they knew about the child, and leveraged resources to support the student's learning. Whether or not this is the most effective approach to instruction remains a question.

Others have questioned the quality or methods of instruction parents engage in to support their virtual school students. Borup (2012) found that the quantity of parental interactions with students enrolled in an online charter was largely negatively correlated with course outcomes. He reasoned that this could have been due to the fact that when students struggled their parents became more involved and increased their interactions. His findings corroborated Black (2009) who also found a negative correlation between parental instructional involvement and their virtual school students' academic outcomes. Black (2009) asserted that in virtual schools parents need to be provided with better instruction on age-appropriate interventions "aimed at improving the effectiveness of parent instruction and encouragement activities" (p. 129).

Occasionally, learning coaches would have their children work together. Perhaps this was more out of convenience than purposeful collaboration. Sometimes, learning coaches revealed that they might have been stuck guiding a student or might have been unable to get through to their child. On these occasions they turned to the Internet or the teachers for help. Surprisingly, they turned more often to the Internet first because, as some of them lamented, the teachers were typically not readily available.

Their reliance on the teachers or the Internet to provide content support demonstrated there were some areas that learning coaches did not feel they were well enough qualified to act on their own. There seemed to be a gap between what they were capable of instructing on their own and the instructional guides or teacher support they received. This calls into question the training and support they engaged in and may suggest that the system implement mandatory training to cover effective pedagogical practices.

In summary, the learning coaches revealed that they did engage in the four HDS mechanisms of behavior. However, importantly, the data collected from these learning coaches revealed far richer examples of the behaviors they engaged in to support their students than described in the Model. This study captured some of the reactions or adjustments learning coaches made as they supported their students and revealed that at a minimum, the learning coaches shifted or adjusted their behaviors to stay in tune with their children. They did not adhere to one particular pedagogical theory nor did they feel obligated to follow a scripted lesson plan or schedule. They merely responded to the flow of the interactions they had between themselves and their children. Whether or not these less formalized instructional practices produce the most effective teaching and learning warrants deeper consideration.

Two Additional Behaviors: Adapting and Leveraging

Data captured from the learning coaches in this study revealed two additional types of behaviors that did not necessarily fit within the boundaries of the four HDS behaviors. The two additional patterns of behaviors learning coaches were observed

engaging in were categorized as *adapting* and *leveraging*. While there are certain aspects of each of these categories that could fit within the scope of the HDS mechanisms of behaviors, there were other data that did not. Patterns emerged which warranted considering these two categories on their own.

Adapting

One of the practices the learning coaches frequently engaged in was their willingness to adapt to the needs of their children. This was described earlier as their ability to adjust their behaviors according to the needs of their children. The term *adapt* was used to describe the behavior of adjustment because it symbolized the dynamic nature of their roles and their interactions with their children. For example, they might have had to adapt the way they were guiding their child through a lesson to make it more suitable to the way the student learned. They might have changed the learning environment to suit the needs of their children. They might have adapted the daily schedule or adjusted the workload to accommodate the needs of the child. Or, they might have adjusted their own beliefs about how to teach in order to accommodate what their children preferred. Klein (2006) was able to show how parents of cyber charter students adapted in her study when she described how they worked with their children to organize a daily schedule and how they moved through the content at a pace suitable for their children. Homeschool parents have also been found to demonstrate this ability to adjust to suit the learning needs of the children (Andrade, 2008; Higgins, 2008; McKeon, 2007; Ray, 2010).

Learning coaches were able to adapt not only because they were willing to, but because they were aware of what their children knew and how their children worked best.

They could react and adapt almost instantaneously because they were on their own time and not tied to a classroom schedule or bound to a lesson plan. Whereas a teacher in a traditional classroom setting typically has set lesson plans and daily or weekly targets, the learning coaches had more flexibility in meeting the progression schedules set by the school.

Learning coaches did not seem to mind having to adapt. The only instance it seemed to prove challenging was if they were running short on time. Otherwise, it seemed almost natural for them to make adjustments as they were merely responding to the needs of their children. These adjustments made for a learner-centric environment that was clearly devoted to the needs of the children.

Leveraging

Another practice that learning coaches actively engaged in was *leveraging* resources to support their students and their own roles as learning coaches. Here, learning coaches were able to choose from a palette of resources that would best fit the needs of their children. One of the more important resources in their toolbox was the teacher. The learning coaches considered teachers as the experts on content and child development. Learning coaches went to teachers when they were “stuck,” meaning either they were not proficient in the content area or when they “couldn’t get through” to a child. They also relied on the teachers as tutors for their children. The learning coaches seemed to imply that they would like to have relied on teachers more but they were not always readily available. As a result, they often turned to the Internet.

The Internet was the primary resource for them. They considered it invaluable, especially because it was immediately available. Some of them indicated that they

preferred turning to the Internet for help before the teachers because the Internet was always there for them. Additionally, the learning coaches were quite proficient at using the Internet and each seemed to have built up a bank of web resources that they relied on regularly to help their students. These web-based resources were used to enrich and remediate their children's learning as well as to support the learning coach's own efforts in aiding the children.

Learning coaches also valued the support their partners could lend because they were usually readily available and because they may have had strengths in subject matters that the participant did not have. This role sharing seems common among families involved in cyber charters (Frey, 2005). Some partners were essential because they had assumed a role equally as involved as the participant and may have provided the type of expertise a learning coach lacked or could step in to cover when the learning coach had other obligations.

Technology related tools were also resources that learning coaches and their children valued. They used these tools for a number of reasons, which are discussed in RQ3.

Learning coaches tended to rely on others to help them provide socialization and collaboration opportunities for their children. However, they did not use others to support their own learning coach endeavors. Most of them lamented that they simply did not have the time to seek outside support, while others felt that they did not need outsider support. Although some of them turned to their partners for support, in general they seemed to work alone. Furthermore, one of the learning coaches revealed that this was a personal experience. Others said that the curriculum was self-contained so they did not necessarily

need to look for outside support. The homeschool parents in Andrade's (2008) were actively engaged with others to facilitate their children's learning. The difference between their active involvement with others and the lack of involvement reported by the learning coaches in this study could have been due to the fact that there are numerous home school organizations that can be found throughout communities in the U.S. or because homeschool parents typically create their children's learning path through a variety of means (Lines, 2000; Ray, 2010) as opposed to relying on one particular curriculum package like the learning coaches did in this study.

It was obvious that for some of the learning coaches the prepackaged materials made their job as learning coach easier. Most of them did use the instructional guides provided through the K12 content materials. However, they used them as they deemed necessary and did not follow them verbatim. This was usually because they implemented what they believed their child needed and did so in a manner that suited their child's learning needs. The curriculum itself encouraged learning coaches to adapt and implement the lessons as they deemed relevant. Sometimes, they had to forego engaging in the extra activities because they did not have the time. For most of them, they believed the curriculum was of high quality and suited the needs of their children. Only one of them questioned the lack of flexibility required to complete the curriculum as her daughter struggled to work through some of the lessons in the manner prescribed. It could have been that her daughter had some learning difficulties that had not yet been identified or that the materials were too difficult for her at this particular stage.

In the traditional classroom, the teacher also has access to a palette of teaching and learning resources. However, the benefit these learning coaches experienced was that

they could access and draw from resources that were beyond the school walls. They could also differentiate the materials as needed. Differentiating learning materials in traditional classrooms is a new trend being realized in some schools that have begun to blend digital and traditional learning. Using digital content in the traditional classroom is one method some believe can help add more personalized learning for classroom-based students (Barajas & Owen, 2000; Crook & Cluley, 2009; Gillespie, Boulton, Hramiak, & Williamson, 2007; Verpoorten, et al., 2009).

In summary, there were two additional behaviors that learning coaches engaged in that were not discussed in the existing literature. These behaviors, which included *adapting* and *leveraging*, were facilitated by the fact that learning coaches were aware of their students and their needs and they were willing to make adjustments to suit them.

Perhaps these two behaviors are unique to learning coaches of cyber school children because in this educational setting they are more responsible for their children's learning than perhaps parents of students who attend traditional schools. Additionally it was apparent that these two behaviors, combined with the other four HDS Model behaviors, enabled the learning coaches to individualize learning for their children. In some of the more progressive classrooms today there is a push to personalize learning for each student. Virtual learning environments (VLEs), blended learning settings, and other digital solutions are paving the way for personalized learning in the classrooms (Gillespie, et al., 2007; Horn & Staker, 2011; Toshallis & Nakkula, 2012; Underwood, et al., 2007; Verpoorten, et al., 2009).

The behaviors that learning coaches engaged in seemed to be driven by their desire to create a learner centric environment for their children. This was corroborated in

part by their choices to enroll their children in this system. The majority cited that they wanted to enroll their children in this school be able to provide them with individualized instruction and to enable their students to succeed at their own pace. Similar to the parents of cyber charter students in Erb's (2004) study, some of the learning coaches in this study may have been pushed away from traditional schooling because they did not believe it met the academic needs or learning styles of their children.

Quality

Another aspect relevant to learning coach behaviors was the quality or type of support they provided their children. To address this topic, I looked to Litke's (1998) findings of parents who were providing educational support for their children who were enrolled in a cyber school. He found that the children described their parents as Absentee, Supportive or Participatory. Absentee parents were the least involved in their children's learning. Supportive parents were seen as more involved, while Participatory parents were seen as most involved in their children's learning. However, this study has revealed that perhaps these categories are too one-dimensional to describe the complex and fluctuating nature of the learning coaches in this study. There was much more to their involvement than could be measured by time alone. First and foremost there were the needs of their children. Then, the lessons plans, learning objectives and progression had to be considered. Borup (2012) found similarly, that the nature of parent-student interaction in an online charter school had less to do with the quantity of time a parent spent and more to do with how the time was spent with students.

Learning coaches shifted the way they were involved primarily based on the needs of their children. Typically, learning coaches found that they were *Supportive* of their older children, but more *Participatory*, that is more hands-on, for their younger children. However, either of these levels of involvement could change if the lesson the student was engaging in required more hands-on involvement from the learning coach or if the child required more guidance.

Learning coaches with more than one child enrolled in the school faced some additional challenges to meeting the needs of their different children. Often, they had to readjust how they had planned to work their children throughout the course of the day because sometimes one student, who was expected to be working independently, would need more one-on-one guidance. Other times, work or business obligations interrupted their work with students, which could be stressful for learning coaches. Usually, those with partners would shift their learning coach responsibilities over to them.

Some learning coaches revealed their frustration when it turned out that their older students were not quite ready to work so independently as they had expected or needed them to be. This may not be unusual. For instance, Eccles & Harold (1993) found that parents who home schooled their middle school-aged children realized that they occasionally needed to step in to guide their children because these students were not ready to go it alone. Boulton's (2008) study of 14 to 16-year olds taking an e-learning course from home found that some students complained that they did not get enough support from their parents. Borup, Graham, and Davies' (2011) study of parent and student perceptions in virtual schools also revealed some discrepancies between the amount of support parents believed they gave to their high school-aged students and what

the students believed they received from parents. These studies underscored the importance of capturing the student voice, which should be taken into consideration when evaluating the quality of support a parent lends to the cyber student.

It may not be possible to assign one category to describe the quality or type of support provided by a learning coach to the cyber charter student. It may be more important to consider how the learning coach is able to adapt to meet the learner's needs. This may prove especially true because every child is different and every parent-child relationship is unique. The very foundation of this type of educational process is the individualization of the learning experience for the child. Measuring the quality of parental support of students in cyber charter schooling may be a challenging, but relevant task.

Research Question Two: Roles

Research question two sought to better understand how learning coaches saw their roles. Unlike the parents of e-learning students in Boulton (2008) and Litke's (1998) studies, learning coaches in this study were certain of their roles and responsibilities for their children's education. They saw themselves as the first in line providing assistance to their children, helping them achieve learning outcomes and guiding them through the content. Learning coaches also found it their responsibility to set expectations for the quality of work their children produced, a practice typical of parents who home school their children (Fan & Chen, 2001; Jeynes, 2010). This could be based in part on their own values or what they intend for their children to achieve. While in the traditional classroom the teacher sets the level for the quality of work expected of the students, here

the learning coaches had more say and influence over what they expected their children to achieve. They had more control over the students' output than parents might have of students who attend traditional schools. For some of the learning coaches, what their children were producing in their traditional schools was not what they believed they could achieve and that was one reason they moved their children to the cyber charter school.

To them, the teachers served as content and child development experts. Teachers were their "go-to" persons when the learning coaches were unable to effectively support their students. Teachers were also seen as tutors, giving their children extra support when required. However, in many instances, the learning coaches turned to the Internet to find their answers before turning to the teachers because the Internet was immediately accessible. Learning coaches reported that at times they were frustrated by the lack of immediate access to teachers.

Having better access to teachers might warrant deeper consideration, especially when looking at the findings from Borup's (2012) study in which 40% of the parents of cyber charter students reported having no interaction with teachers, and 51% of the parents reported having weekly interaction with teachers for an average of five-minutes or less. The outstanding question is how might the system facilitate more positive and frequent interaction between parent and teacher to better serve the needs of the students?

Learning coaches in this study were confident in their abilities to serve as learning coaches for their children. This could be due in part to their higher education levels and professional work experiences. In any case, this was consistent with what Hoover-Dempsey and Sandler (1997, 2005a) found among parents of traditional school students,

who actively involved themselves in their child's education. In fact, confidence and the feeling of ultimately responsibility for his child's education were leading indicators of parents who tended to get involved with their students education and where their involvement was linked to successful student academic outcomes.

Unlike the home school parents in Andrade's (2008) study who frequently engaged in peer networking and collaboration, none of the learning coaches in this study belonged to any type of learning coach support groups or organizations. This was due in part because they reported that they did not feel it necessary or they simply did not have the time to get involved.

Some of the learning coach comments also seemed to suggest that the training provided by the system for its learning coaches was of little value to them. In fact, one of them suggested that it was "remedial." It could be that this group of learning coaches was rather sophisticated and placed high demands on the system. This could be an important, but overlooked aspect. The system serving these sophisticated parents might need to find ways to meet their level of expectations by differentiating the services they provide.

Most of the learning coaches believed that the curriculum was self-contained and provided them with the guidance they needed to help their children through the content. This could have been another reason why they did not feel the need for external help from others. In this sense, they differed from some of the practices engaged in by homeschool parents. Homeschool parents typically have been known to build their child's curriculum borrowing from other homeschoolers or looking to different commercial vendors for suitable products (Andrade, 2008; McKeon, 2007; Ray, 2010).

They also participate with other homeschool parents and get involved in like-minded groups to support their efforts.

There were a number of tasks associated with being a learning coach, from grading papers, to organizing the daily schedule. Many of these tasks have been described in the literature as administrative-type tasks (Ash, 2010; Bogden, 2003; Butler, 2010; Frey, 2005; Revenaugh, 2005; Vergari, 2009). For some, these administrative tasks could prove time consuming and at times, overwhelming.

In addition to these tasks, learning coaches felt it was their responsibility to make sure that their children were producing quality work. They did this by setting expectations, which were typically formed by their own experiences and by what they believed the children were capable of producing. This behavior – setting expectations – was found by several researchers as an important practice done by home schooling parents who helped their students to achieve academically (Fan & Chen, 2001; Jeynes, 2010).

For learning coaches, merely progressing through the content and passing end-of-unit tests was not enough to determine how well their children knew the content. They reported that tests were markers and had higher expectations for what they believed their children should achieve. Yet, setting expectations seemed to be a subjective task, based in part on the values learning coaches had and what they believed of their children's abilities.

Setting expectations could prove challenging at times when a child did not meet their expectations. While some of them turned to the tests as markers, or used grading rubrics created by the teachers, they wanted more support from the school on how to

overcome these types of challenges, some of which may have been related to discipline issues. For instance, two of the learning coaches reported that sometimes their children rushed through the work so that they could play. This often led to poor quality work. These same learning coaches reported their frustrations trying to discipline their students to accomplish the work with quality. This might present an opportunity for the system to provide some type of learning management techniques that learning coaches could employ as needed.

In summary, learning coaches clearly believed that they were ultimately responsible for their children's learning and they set high expectations for the quality of work they expected their children to accomplish. They exerted control over their children's learning that may not be typically found of parents of students enrolled in traditional schools, because these more traditional environments leave most of this type of control to the teachers. What type of effect this parental role has on children's academic outcomes is a question that requires further study.

Research Question Three: Technology

Technology was absolutely fundamental to the learning coaches' ability to school their children at home. They mainly relied on technology to communicate with the school, to access the curriculum and administer their children's progress, and to engage in the types of behaviors typically associated with the four technology categories described by Means (1994), including: using technology to communicate and explore, to engage in tutoring, and as a tool to produce items. This type of use resembles how technology and the Internet were used in the late 90s and early part of this century, before

social media became as readily available as it is today. Further, even though the learning coaches were familiar with, and reported using, social media for their own personal endeavors, they did not report using it to instruct their children. Perhaps this was because they believed their children were too young to engage in social media or perhaps the system did not promote it as a method for learning in this environment.

Interestingly, there was another technology-use behavior that emerged which was not included in the four categories described by Means (1994). Several of the learning coaches used technology to *reward* their students or to motivate them. It seemed that for their children, technology was something to look forward to using. So, the learning coaches leveraged this to their advantage in order to get their children to accomplish learning tasks or to meet certain expectations. Technology, it seemed, was a type of extrinsic reward for these digital natives. Prensky (2001) described that today's children have grown up wired to technology and that it has been part of their environment from early on in their lives. Most have experienced using technology for entertainment or to engage in fun activities. As a result, it is not unreasonable to believe that technology could be used as an extrinsic reward for these cyber students.

There were a few learning coaches who were concerned with topics associated with information literacy. They realized the perceived dangers inherent with using technology and the Internet without guidelines. Several were proactively trying to teach their older children how to evaluate sources that they retrieved from the Internet. Another participant wanted to make sure his child understood how to balance the use of technology. It appeared that they came to these concerns of their own accord and that they were trying to find remedies and solutions using their own experiences. None of

them seemed to reference any existing resources to support their efforts. Perhaps this was because they had not yet realized the significance of their concerns or that the school itself had not yet encouraged learning coaches to proactively engage in helping their students address topics associated with information literacy.

Unlike the home school parents in Andrade's (2009) research, the learning coaches in this study did not report using the Internet to engage in more robust activities to support their own learning-coach endeavors. Those involved in Andrade's study were regular visitors of blogs and frequented online communities of practices oriented towards educating children at home. The learning coaches in this study reported that they did not have the time to be involved in other groups, online or face-to-face, and some claimed that they did not find the need to be involved with other groups to support their own efforts. Perhaps this was because some of them felt that the curriculum was self-contained. One participant was interested in the idea of getting involved with other groups to support her efforts, but lamented that the lack of time prevented her from doing so.

Each of the learning coaches was comfortable using technology and working in this cyber-learning environment. In fact, none of them reported having any problems using the online management system or technology for learning. When they did encounter technical issues, they turned to their partners first before turning to the school's own IT department or the teachers. Some of them reported turning to their children for help. It was not clear why they did not go to IT first. However, it might be presumed that turning to family for help would result in more immediate results. It could be that this particular group of digital immigrants had sufficient experience using technologies before

engaging in this environment or that because this school was so technology-dependent they had no other choice but to become proficient using technology.

Overall, technology was a tool leveraged by the learning coaches to benefit their children's learning. It was used as a reward and was viewed as a valuable tool for accessing information, teaching and learning. However, it was not used to reach out to others to further their own practices as learning coaches.

These learning coaches were proficient using technology. However, what they seemed to be lacking was a deeper understanding of how the technology could be used beyond an information research tool and how it could be used, for example, to build knowledge with others or to engage their children in deeper collaborative learning. This could reflect the lack of awareness they had of formal pedagogical approaches for using technology or the lack of emphasis the system placed on using technology for more than information and production. It might imply that learning coaches need specific training to maximize the benefits that technology can bring to teaching and learning. For instance, Technology Pedagogical Content Knowledge (TPACK), which is a framework for helping to organize how content, pedagogy and technology knowledge can be used to integrate technology effectively (Mishra & Koehler, 2006; Archambault & Crippen, 2009), might be a useful strategy for teaching learning coaches how to effectively leverage technology to enrich their children's learning experiences. Additionally, training learning coaches on aspects of 21st Century skills and knowledge might encourage them to make deeper use of technology, give their children more global or collaborative learning experiences aided by technology and to help them employ information literacy learning strategies.

Research Question Four: Challenges

Engaging as a learning coach came with challenges. Learning coaches cited that the primary obstacle they faced was a lack of time. Those who worked full time reported struggling with the balance between working and schooling their children.

Similar to Davis' (2011) findings and Horn and Staker's (2011) prediction that lack of time is a major barrier for most parents who support virtual school students, the learning coaches in this study cited time as one of the most challenging aspects. For most of the learning coaches, the challenge presented by the lack of time was compounded when they had multiple children to school. The more children and the greater the gap in years between the children, the more challenging it was to try to provide them the support they needed when they needed it. Although for older students the curriculum was designed to enable them be independent learners, learning coaches lamented that their older children might not have been ready to be so independent. E-learning readiness among younger learners has been a concern raised by researchers who have found that younger students tend to face greater challenges being independent learners in online learning environments (Barbour & Reeves, 2009; Boulton, 2008; Cavanaugh, et al., 2004; Roblyer, 2005).

Time also proved challenging for learning coaches who described their frustration in getting immediate feedback and support from the teacher. Having the Internet at their fingertips, they would turn to it first because they knew they could access immediate help. While they regarded the teachers as content matter and child development experts, they were less than satisfied with the rate at which teachers would respond to their inquiries. However, each of them gave an example of getting help directly from the

teachers. This usually happened during parent teacher conferences or scheduled meetings with teachers, rather than spontaneously.

Lack of time also prevented some of the learning coaches from getting support from external training sources or groups for their efforts. Yet it was obvious that each of them could have used pedagogical and content training because at times they had to rely on the teachers, their partners or the Internet for help when they were unable to guide their children effectively. This seems to indicate that the system should consider providing compact training units that are focused on pedagogical strategies or rich in content knowledge, and that these units should be embedded within the lessons so that the learning coaches could access them immediately and as they required. Mandatory training might also be best given at the start of a learning coach's career and might also include TPACK and concepts tied to 21st Century skills and knowledge as a way to maximize the use of technology for teaching and learning.

Keeping students motivated and progressing through the content proved problematic at times for some of the coaches. Some struggled with "wearing two hats," one as learning coach and the other as a parent. It was apparent that disciplining children and insisting on a certain quality level of work be performed by the children was not always easy. Some alluded to wanting more help and guidance from the school. They were seeking what might be considered classroom management techniques, or ways to discipline, other than those they might use when wearing their parenting hat. They seemed to be looking for tactics that could be more aligned to the type of disciplinary tactics teachers might use so that they could separate their role as parent and as learning

coach. More data needs to be collected on the parent-child relationships to better understand how to support parents in disciplinary-type situations.

Revised Framework

The original framework used for this study served as a tool guiding data collection and analysis. However, the results of the study required that modifications be made to the framework to better reflect the experiences and beliefs of learning coaches involved in this study.

Figure 7 shown below illustrates the revised framework. It shows that central to the behaviors learning coaches engaged in was their focus on providing a *learner centric* environment for their children. This was one of the three important themes emerging from the data that underscored how they wrapped the children's learning in family values that resonated with their own daily lives. They were able to do this because they were intimately aware of their children and their children's needs. They also perceived themselves as ultimately responsible for their children's education and academic outcomes.

The two other important themes revealed in the data, *resources* and *real life*, also played out in the way they supported their children's and their own needs and the way they assured themselves of what their children were learning. For example, they often turned to *resources* that they knew would best suit the needs of their children and which were most readily available to them, such as the Internet. Further, the concept of *real life* was fundamental to the way they reinforced what the children had learned and validated that they could make connections between content and their own lives.

Conceptual Framework- Reframed

Behaviors of Learning Coaches and Influences

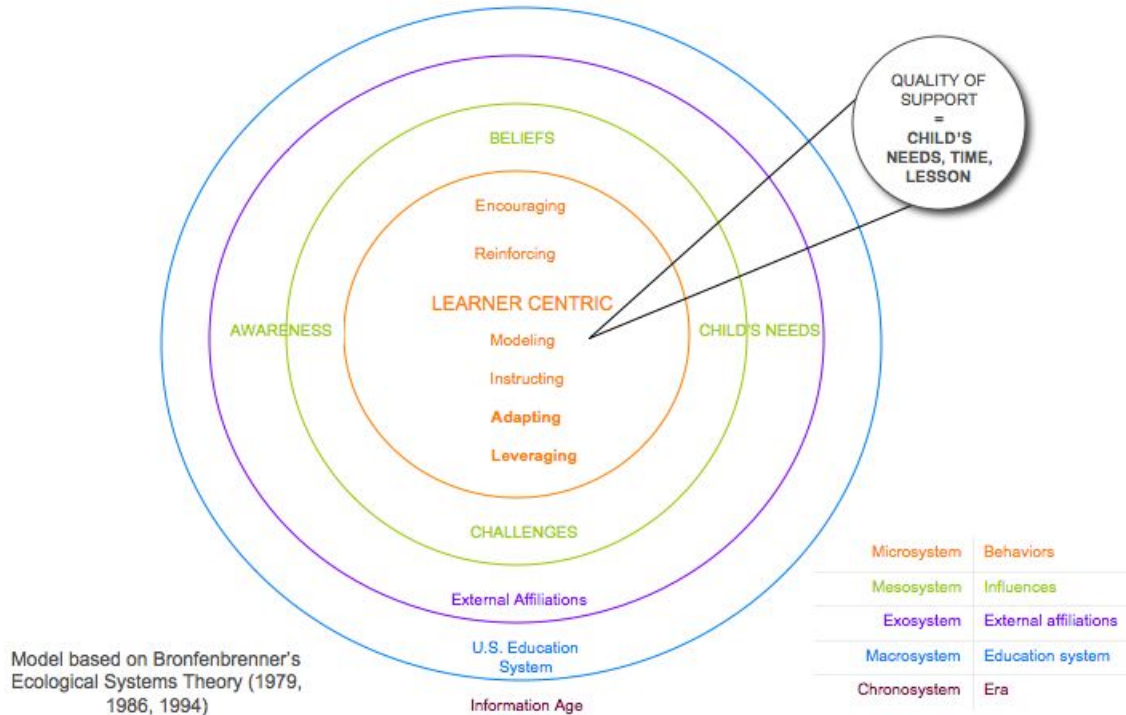


Figure 7. Conceptual Framework Reframed. Diagram depicts a revised version of the Conceptual Framework shown in Figure 1. It reflects data collected from the learning coaches as it affected the categories within the five nested systems.

The diagram also illustrates that the learning coaches did engage in the four mechanisms of behavior described within the HDS Model of Parental Involvement and that there were two additional behaviors that they enacted and which seemed central to providing their children with support. These two additional behaviors are shown in bold and include *adapting* and *leveraging*.

The diagram shows that the quality or type of support learning coaches provided to their children seemed to have been a reflection in part of how they adapted to serve the specific needs of their children as well as the time they had to involve themselves with

their children's schooling and the demands of the lessons themselves. This suggests that, at a minimum, to measure the quality of support that learning coaches provide their children a number of factors must be considered, including how the learning coach is able and willing to adjust his behaviors and beliefs about teaching and learning.

The learning coaches did not seem to be influenced much by external factors. It was the whole needs of the child that drove their actions. In fact, they did not involve themselves in groups or participate in the online support groups or training provided by K12, Inc. Instead, they seemed confident to go it alone, but leaned to the teachers, the Internet and their partners for help when they needed. They also found that the curriculum was self-contained and provided them with sufficient guidance. Furthermore, while the system did provide online forums for learning coaches, these learning coaches did not have the time to participate, and some were not interested in participating with external groups.

On the other hand, they were keen to the external demands emanating from standardized tests, the curriculum and the system. They worked with their children to ensure they were successful at meeting the requirements required of these elements. Yet, they considered their children's ability to connect what they had learned to real life as more relevant and telling of what the child had learned than testing alone.

The findings from this study have provided a deeper look at how these learning coaches supported their children through their cyber charter schooling. They have contributed to the existing literature and have given the reader a broader understanding of the roles, beliefs and challenges faced by this group of learning coaches.

Conclusion

This study has given voice to a group of educational facilitators of whom little is known. Referred to as learning coaches, these parents/guardians serve an important role in the education of their children who attend cyber charter schools. This study is significant because there is apprehension that learning coaches are being handed a task better served by certified teachers. Furthermore, there is a profound need to develop a better understanding of how students in these schools are being educated because concerns are rising over the effectiveness of cyber charters to help students achieve, and evidence is mounting that shows students in these schools are falling behind their traditional school counterparts and dropping out of high school at higher rates.

Four important conclusions emerged from this study:

1. The HDS Model, which describes the four behaviors of parental involvement in their children's education, does not sufficiently capture other more subtle and complex behaviors associated with parents providing support to their children in cyber charter schools;
2. The learner centric environment these learning coaches created is worth examining further, especially as it relates to personalized learning and other educational reforms some consider effective for providing more meaningful education for younger students;
3. The existing literature has not sufficiently addressed the challenges faced by these learning coaches; and,
4. Since learning coaches play a significant role in the education of their cyber charter students, then the educational community should seek to provide the most

effective support system for them so that they can help their children be successful in their academic pursuits.

Beyond the Model

It was evident that learning coaches wanted the best possible education for their children. They enrolled their children in this alternative school because they believed their children would thrive academically. They committed their time and energy to provide what they believed was an education that best met the needs of their children. Even though they recognized the dual role they shared with the teachers assigned to their children, they fully believe that they were ultimately responsible for the learning outcomes and instructional guidance of their children.

For these parents, and their students, learning did not begin or end with school bells. Rather, it permeated the day, and the home. Perhaps without intention, they created a learner-centric environment, driven by the whole child's needs, where learning was customized each day. This could be seen as an advantage they might have had over traditional schoolroom teachers who are often bound by the daily lesson plans and structured school schedules.

Personalized and student-centered learning concepts are described as progressive models for reforming schools that serve groups of students and leverage student academic data to customize teaching and learning (Christensen, 2008; Gilbert, 2006; Robinson & Aronica, 2009; Toshalis & Nakkula, 2012; Verpoorten, Glahn, Kravcik, Ternier, & Specht, 2009). However, the learner centric approach implemented by learning coaches seemed to facilitate a more individualized and perhaps nurturing way making learning

meaningful for their children. Learning coaches focused on the individuality of each child and (a) took into account the child's moods, interests, and his voice; and, (b) looked for opportunities throughout the day to help the child connect what he learned from the books to his own real life experiences. The learning coach's intimate relationship with the child facilitated a deeper understanding of the child than might occur between a student and his classroom teacher or the data sets generated by digitized learning. Yet, unlike the classroom teacher, they lacked some expertise over content, child development and student-management. There was no doubt that their keen awareness of their child was central to their ability to adapt the way they guided the child, or adjusted their own beliefs or the environment to make learning a positive experience for the child.

These practices seemed to resemble what some of the more prominent voices promoting educational reforms agree on – that student-centered and personalized learning, which leverages technology, will provide opportunities for students to engage in learning that is more meaningful to them and will enable students to engage in skills necessary for the 21st Century workplace (Christensen, et al., 2008; Partnership for 21st Century Skills, 2004; Prensky, 2008; Rotherham & Willingham, 2009; Silva, 2008).

The lessons we have taken away from these learning coaches call on us to examine the deeper implications of creating a learner-centric environment. They urge us to examine the whole child, his environment, and his life and to use this knowledge to contextualize learning for the child. We should look to harness these attributes as we move on towards more automated systems of learning. We are living in a world where some suggest that digitization is changing the way we think, work, play and where the

age of the personal robot and human enhancement agents are rapidly approaching civilian life (Bacon, 2012; Dettmer, Schmundt, & Tietz, 2012; Lyons, 2012). Chances are, these advanced technologies may reach our classrooms and our students sooner than we plan (Darling, 2012; Troop, 2012).

At a time when there are concerns arising over moral agency and our accelerated progression towards digitization, it seems essential that research focus attention on understanding how to infuse these types of advanced technologies with the ability to consider the whole child and to help the child learn in ways that are meaningful, connected to real life experiences, and considerate of humanity.

Challenges Faced by Learning Coaches

The challenges faced by learning coaches may not be that dissimilar to those experienced by teachers: overwhelming amount of administrative work, juggling time to complete lessons, obligations from other life responsibilities that consume time away from learning, and implementing disciplinary actions or reward systems to keep students motivated. However, learning coaches in this study were also faced with the challenge of the dual role of parent and teacher. Separating parenting from teaching may or may not be a practice for which there are steadfast rules. Where teachers usually have the advantage of having had professional development training in many of these classroom management-like activities, learning coaches may not and may have to rely on trial and error to develop the skills to overcome these obstacles.

The gloomy results emerging from academic comparisons between cyber charter and traditional school students may continue to put pressure on the parents who educate

their children in this public school environment because they play a vital role in the educational outcomes achieved by their students. However, parents may take on this role without fully understanding the complexities associated with educating children and they may not be fully prepared to deal with these challenges. Of course, they know how to be parents, but teaching is another vocation. It requires schooling to learn not just subject matter, but importantly, to learn about how a child's development should progress along an educational continuum, and how to support a student towards his fullest academic potential. Without immediate access to teacher-experts, these parents may be left to find their own solutions. Little research has been done to examine whether the resources, including the pre-packaged curriculum and the Internet resources they rely upon to guide their children are as qualified as the very teachers they have replaced.

In summary, this study identified several significant challenges facing learning coaches, including:

1. Lack of time;
2. Complexities of the role; and,
3. Lack of immediate access to teacher-experts.

If the public schooling system is going to rely so heavily on the parents/guardians to engage in such a critical role, it needs to evaluate the gaps between the support it provides learning coaches and their abilities to fulfill such lofty obligations.

System Improvements

Until it has been determined that digital resources used in these schools to dispense content and child development advice are as qualified as certified teachers, the

system at a minimum must seek to provide immediate, easy access to highly qualified teachers.

Furthermore, while the curriculum may be thought of as being self-contained and regarded by some as high quality, the challenges faced by these learning coaches make it necessary to examine the effectiveness of the system as a whole. In particular, their dependence on the Internet to resolve many of their questions, their use of the instructional guides to support some, not all, of their coaching efforts and their desire for better access to teachers warrant deeper consideration in order to answer whether the system is providing consistent support to parents who may not be certified school teachers.

Additionally, the way learning coaches perceived their roles as being ultimately responsible for their children's learning calls attention to the roles teachers in these schools play. The system should investigate parent-teacher interaction and parent-teacher roles to clarify responsibilities and to free up teachers to be content and child development experts who can lend immediate support to learning coaches.

The system should look towards implementing a more proactive scheme of peer and professional development, to include effective pedagogical strategies, for these non-certified teachers and should encourage them to get involved with peers and colleagues. This could facilitate shared ideas and foster a more collaborative environment of support where learning coaches could turn to each other for support and advice.

If the system continues to rely on using social media and other forms of digital communications to engage these learning coaches it needs to do so in such a way that makes it convenient and easily accessed. These coaches had minimal time to engage in

learning themselves. Yet they seemed receptive. It could be that the system needs to implement mandatory training, evaluations and continuous improvement schemes to be able to ensure that these learning coaches can provide a high quality learning experience for their children. There may also be incentives to encourage learning coaches to engage in peer review that could help close the gap between working in isolation, and working effectively. Treating learning coaches as professionals engaged in the important vocation of teaching might encourage them to participate in training, provided that training concerned such important topics as pedagogy, child development, information literacy, and other related areas.

Technology was clearly central to this form of schooling. Yet it was used by learning coaches as more of an information and production tool rather than as a gateway to a personal learning community where ecologies of learning could be accessed to support not only students, but also the parents/guardians who instruct them. The system should provide learning coaches with training in effective technology integration.

Further, it was not evident that the system effectively encouraged these learning coaches to engage their children in those types of learning activities that might help students to develop the knowledge and skills they need in typical 21st century communities and workplaces. The system should look to providing a clear pathway for learning coaches to help their children, and themselves, to engage in those skills and knowledge sets set forth by the Partnership for 21st Century 21st Skills (2004), such as collaboration on a global scale, social communications and digital literacy. Knowing that these parents were technology savvy and were keen to have their children learn in a real-world context that was laden with technology, the system could take full advantage of

sophisticated social media tools to enhance their experiences with these 21st century skills.

Implications

We have learned from these coaches that there could be benefits associated with learning when tending to the whole needs of the child and leveraging a keen awareness of the child's moods, interests and abilities to adjust the teaching accordingly. It would seem reasonable to investigate how to harness these attributes for inclusion in systems that seek to automate, yet personalize schooling for younger students.

We do not know enough about learning coaches to resolve whether they can help their children to meet the educational standards set forth in national and state educational requirements. However, understanding more about the parents and guardians themselves, and their relationship with their children as students may help to address those aspects of the system that support learning coaches. Recommendations for addressing such needs include:

1. Developing a better understanding of why parents choose to enroll their children in this form of schooling, especially understanding their values, goals and expectations set for the children;
2. Developing a better understanding of parent-student interactions and parent-teacher-interactions; and,
3. Developing a better understanding of the challenges faced by learning coaches.

Further, there are gaps in the system that need to be critically evaluated and addressed in order to ensure that this form of education is effective and can indeed help

students gain the skills and knowledge they need to succeed in our 21st Century communities and workplaces. Some of the issues that should be reviewed include:

1. How to better guide learning coaches to implement effective pedagogies for teaching and learning;
2. How to guide learning coaches on the importance of modeling to scaffold learning;
3. How learning coaches can use technology more effectively to enable deeper learning, global engagement and collaboration for students; and,
4. How to facilitate and communicate a better understanding of the roles and responsibilities of teachers and learning coaches in cyber charters.

In fact, teacher roles and responsibilities in this type of learning environment need deeper investigation because, as the results of this study have shown, the more important role for the teacher was as content and child development expert. Unlike the role of classroom manager that most traditional classroom teachers also must assume, the role of the teacher in a cyber learning environment may become unbundled, enabling him to focus more on specialized tasks related to student academic achievement (KnowledgeWorks, 2009; Toshalis & Nakkula, 2012).

Summary

This study has been able to expand our understanding of the practices learning coaches engage in to support their children's educational endeavors.

The goal of this study was to contribute important, timely and relevant information concerning learning coaches so that policy-makers, educators, EMOs and the

public can make informed decisions about how to effectively implement and manage these alternative schools.

This study also sought to serve as a building block towards a more robust model of parental involvement in their children's cyber schooling. There currently is no one parental involvement model that has yet to capture the dynamic, complex and intimate nature of parents and guardians who serve in a primary capacity to educate their cyber school children. The HDS model, while relevant, falls short of examining the depth and breadth of how parents of cyber charter students involve themselves to support their student's educational endeavors. Furthermore, the literature concerning parental involvement in traditional, home and virtual schooling is somewhat fragmented in that it does not examine the entire scope of systems affecting the parent/guardian as educational facilitator. Hopefully, this study has contributed towards building a model that can be used to examine a more complete picture of how learning coaches serve their children's educational endeavors.

Finally, if we are counting on these parents and guardians to play an important role educating their cyber school children, then it is imperative that we provide them with the type of support capable of leading to excellence in education. It is our responsibility to move beyond questioning their qualifications and to step forward to help them deliver the type of education capable of producing outstanding learning.

Recommendations

The results of this study have provided a glimpse into a phenomenon that has yet to be fully explored. While this exploratory study could not realistically answer all the

questions surrounding learning coaches, it has provided a voice for those parents and guardians who served as learning coaches for their children enrolled in cyber charter schools. It has also raised more questions concerning how to improve systems to serve them better.

Results indicated that being a learning coach for your own child is a complex and fluctuating role that requires dedication and a willingness to adapt to meet the needs of your child. Therefore, future research should seek to gain a better understanding of these patterns of support and beliefs and should also include the voices of learning coaches whose children are not excelling in this alternative learning environment.

The framework drafted in this study may serve as a starting point to capture more completely the dynamic forces between parent-student, parent-teacher and parent-external forces that may impact his role as learning coach. Furthermore, future research should also consider more direct observational methods for collecting qualitative data that may capture the subtle nuisances that occur between a student and his parent as they engage in educational pursuits.

This study revealed significant evidence that current systems in cyber charter schools are still evolving. To be more effective, these systems should incorporate the recommendations based on the findings of this study. In addition, further research is needed to perfect these systems.

As these learning coaches have shown, they are well educated and have high expectations for their children's academic pursuits. However, the current training and support provided by the system seemed to have had little value to them. Therefore, investigation should be conducted to consider how to best meet the needs of these

sophisticated learning coaches. Perhaps differentiated training and services would best serve the diverse needs of learning coaches.

Last year, Horn and Staker (2011) predicted that this form of cyber schooling, where the parents must be highly committed to the education of their children, would grow to only about 10% of the total student population. However, this prediction falls short of anticipating the rapid advances in technology that may bring about digitized tutors or personal robots that may eclipse having to rely on parents as guides and prevail as an alternative way to educate our children. What needs to be studied is how these automated systems can be developed to take into account the whole needs of the child and to provide the child with a learning system that helps him connect what he is learning to his everyday life.

Where cyber charter students have been falling behind their traditional school counterparts in state exams, home school students have excelled. Future research should consider comparing the educational practices of home school parents to those of cyber charter school parents.

The educational system in which these parents operate should continue to provide an avenue for these educational facilitators to express their needs and the challenges they face. Such a forum may help the system to respond more proactively and may help policy-makers, educators and the public to better understand how to effectively support parents and guardians of students enrolled in cyber charter schools.

In order to successfully support students in cyber charter schools, learning coaches, who we have to remember are the very parents or guardians of these students, need appropriate systems support. They struggle with trying to do everything on their

own. To improve the potential experiences of learning coaches, and by extension cyber charter learning environments, this study recommends that cyber charters:

1. Investigate the needs of learning coaches and their students, especially those students who struggle in this learning environment, to gain a better understanding of how to effectively support them;
2. Improve systems to enable learning coaches to engage in more effective teaching and learning;
3. Provide differentiated training and services to meet the unique needs of learning coaches; and,
4. Study the roles of teachers and parents to gain a better understanding of how to appropriate their responsibilities to maximize learning opportunities for students.

Finally, this alternative form of schooling has optimal potential to leverage learning that reaches beyond school walls and provides a truly individualized learning experience for each student. By incorporating these recommendations students may have a greater chance to succeed in cyber learning environments.

APPENDIX A.

SEMI-STRUCTURED INTERVIEW GUIDE

SEMI-STRUCTURED INTERVIEW GUIDE

PARTICIPANT ID: _____

Interviews will be conducted to collect data regarding research questions RQ1, RQ2 and RQ3. One 30 to 60-minute voice-over Internet Protocol (VOIP) interview will be conducted with each participant. A semi-structured interview guide will be used to conduct interviews with each of the participants. The guide is divided into three sections. If necessary, participants may be asked to be available for a brief follow up interview in order to seek any necessary clarifications arising from the initial interview.

Opening statement

Thank you for agreeing to participate in this interview. I hope to keep it to no more than 60-minutes. I will keep this interview confidential and will make sure that you remain anonymous. I will use the results of this interview for the research I am conducting to fulfill my dissertation. If this study is published, your name will not be used.

To ensure confidentiality and anonymity, the University of Hawaii's Institutional Review Board, requires that all interview participants review and complete an informed consent form if they choose to participate in a study. This was the form I emailed to you earlier this week. Do you have any questions? When you are ready, please sign the form and mail it to me at the US address I included in the email.

Do you mind if I use a recording device? [If the participant agrees, then I will use the device. If the participant disagrees, then I will rely on note taking as a way to record the interview.]

Please know that you do not have to answer any question you do not feel like answering. You may also stop this interview at any time.

Interview Guide

What are the grade levels of your children attending HTA now? _____

How would you say they are doing at HTA? _____

Part I – Research Question 2:

The purpose of this part of the interview is to collect data regarding RQ2: How do you perceive your role as learning coach? (Breadth, depth of support)

Q1. Describe what you believe are the three most important roles fulfilled by your children's teacher.

Q2. Describe what you believe are the three most important roles fulfilled by you as your children's learning coach.

Q3. Referring to the Teacher/Parent Chart please indicate where you believe you fall on the matrix. Describe your thoughts behind your indication.

(Note: Prior to the interview, participants will receive a PDF file of the Teacher/Parent Roles Chart that they will use to answer this question. The chart may also be presented as a shared screen file that participants will be able to see and manipulate during the interview).

Part II – Research Question 1:

The purpose of this part of the interview is to collect data regarding RQ1: How do you support your children academic endeavors in this school? (Type of support)

Q1. Describe how you “encourage” your children during his/her learning?

Q2. Describe how you “reinforce” your children's efforts during his/her learning?

Q3. Describe how you “model” good learning behavior for your children?

Q4. Describe how you provide “instruction” to your children during school time?

Q5. Describe any other behaviors, actions or activities you engage in to support your student during his/her learning time?

Q6. Please listen to the following descriptions and think about which one you believe best summarizes your involvement as a learning coach for your children:

- **A** My student typically works on his/her own. I don't really need to be too involved (ABSENTEE)
- **B** I usually involve myself with my student by ensuring that he/she student fulfills his/her school-related responsibilities. I typically do this by asking him/her questions regarding his/her progress, speaking with his/her teachers or providing him/her with tutorial assistance. (SUPPORTIVE)
- **C** I think I am quite influential of a student's schooling because I am involved in many aspects of his/her schooling. I provide frequent tutoring. I help my student with editing, checking assignments and providing supervision. (PARTICIPATORY)

Part III – Research Question 1:

- Q1. How do you know when you are doing things “right” (schooling)?
- Q2. Where/who do you turn to for support? (Resources, people, tools, etc.)
- Q3. Do you use the training provided by HTA, K12 – or something else?
- Q4. How would you describe your child’s progress in this program?

Part IV – Research Question 3:

The purpose of this part of the interview is to collect data regarding RQ3: How do you use technology to support your students? (Support resources, systems)

- Q1. Describe some of the applications you use to support your children as they engage in learning.
- Q2. Describe other tools that your children frequently use that you may or may not use yourself.
- Q3. Describe how you use technology to educate your students.

NOTES and FOLLOW UP:

APPENDIX B.
FOCUS GROUP QUESTIONS

EXAMPLE: FOCUS GROUP

POST: Please share some of the challenges (or conflicts) you have faced as a learning coach & any strategies you may have used to overcome them

Remember, this is a private blog. It can only be accessed by those who I have designated as participants for this space.

Okay, I will go first:

As a learning coach I struggled at times trying to get my son to write with quality. Conversely, I learned early on that my daughter is very intrinsically motivated and just did well because she wanted to do so for herself. It took me a while to figure out how to get my son to try as hard with writing as he did with math, science and robotics. Then, one day he came home from HTA and said, "mom, I got a better grade than so-and-so." It dawned on me that his competitive nature on the playing field was a natural carry over to learning. He needed to measure himself against others and liked the challenge of trying to out do his classmates. I started looking for writing competitions, found one (StarPoets, Windward Community College/Starbucks) and off he went. He still had a long way to go improving his skills, but at least now he had motivation to do so. We didn't have to battle so much any longer. He also really enjoyed Study Island because he could see his standing in comparison with others.

Here is the link to the **PRIVATE** Learning Coach Forum. Please review posts and respond by 12-7-11. Feel free to offer useful ideas & links for other participants. If you're seeking advice feel free to post questions to others. Think of this space as a forum for learning coaches to share and exchange ideas.

This private space can only be accessed by those whom I have designated as participants. Since it's private, you'll need to create an account (see instructions below).

Thanks! Lisa

[Note: Because participants did not respond to the blog, email was used instead.]

APPENDIX C.
DIARY LOG REQUESTS

Diary Log Requests

Diary Log Week 1

Request: This week, please reflect on one of your favorite lessons that you engaged in with your child(ren). Briefly describe the lesson and then what you and your child(ren) did to work through the lesson.

As an example, I have created a recording of one lesson my son and I engaged in that was a fun, great learning experience for both of us. You can hear it at:

<http://voicethread.com/?#u160805.b2599619.i13786269>.

If you would like, you can just record your diary log after you hear my recording by selecting the “comment” button under the photo of my son. Or, if you prefer, you may send me an email or text of your log.

Diary Log Week 2

Note: I did not receive any postings to my week 1 request. I resent the week 1 request.

Diary Log Week 3

Request: This week please reflect on one of lessons you engaged in with your child(ren) and describe some of the steps you went through as you worked with your him/her.

Diary Log Week 4

Note: I did not receive any responses to the previous week’s request. I resent the request.

APPENDIX D.

SECONDARY DATA: RESOURCES FOR COACHING

Resources Used by Participants to Support their Children

This table presents the artifacts that participants described as being useful in their role as learning coaches for their children, and it lists some of the other resources which may have been available to them as part of the K12, Inc website. Each item was analyzed during the content analysis phase in order to better understand its functionality for supporting students enrolled in the cyber charter school. The *Artifact* column provides the name of an item and its type. The *Category* column describes the type of artifact and where applicable terms included in (Means, 1994) taxonomy of technology are used. The *Summary* column provides a brief description of the artifact. In some cases an example of how an artifact was used by a learning coach may appear in the *Example* column. Examples were included as the participants made them available. In other instances, no example was given, but a description of the artifact is given because one or more participants listed it as being useful. In some cases, none of the participants used the artifact.

Artifact	Category	Summary	Example
Audio books	Explore	Audio books are digital versions of paper-based books.	Several of the participants described that their students use Kindles to read. One described how her children view reading on it as a reward – “The kids right now are all excited about my Kindle so they want to borrow it to read. That’s one way we thinking we might be able to encourage them to read more.”
Discovery Education www.discoveryeducation.com	Explore	A robust educational enrichment website offering videos, interactive learning programs, and support materials in various subjects. Content is linked to state standards, and professional development opportunities exist for teachers.	See PBSKids.org

		There is a subscription fee to use most of the videos and content on the site. However some resources are free, such as Puzzlemaker and clipart. The site is owned by Discovery, Inc., a publicly traded company specializing in nonfiction media.	
Google www.google.com	Explore	Provides a web search engine. It is the most widely used web search engine in the world, serving hundreds of millions of queries daily. This site is free to use.	Every one of the participants cited using Google to help search for items on the web. One participant said – “We use Google a lot!” This sentiment seemed to ring true for all participants.
iPad www.apple.com	Tool	The iPad is a tablet computer produced by Apple, Inc. Among its many uses, it is primarily used as a platform for audio, visual and text-based media. It runs “apps,” which are downloadable programs that perform a variety of functions. It can be used as a tool much like a laptop or desktop computer.	Several of the participants reported owning an iPad. One of them described that his student uses an app for math to help him learn concepts – “He has several math apps on his iPad that helps him.” Another participant described the usefulness of the iPad in allowing her students to access their home computers in order to do their work – “The newest thing that we just found out about is this software that they can access their computer from their iPad. So they can be up to 100 miles

			away and access their computers. They really like that.”
K12, Inc. Website (general) www.k12.com	Explore	Provides information about K12 in general and also provides access for its subscribers (teachers, parents, students)	This site is the main site for users of K12, Inc. However, none of the participants described how they used this site.
K12, Inc. BigThink ¹²	Communicate	Billed as a social networking tool, this K12, Inc. site is a place for parent, teachers and students can share information and ideas. The site contains resources, message boards, new feeds, blogs, etc., within K12, Inc.'s proprietary system. Only K12 customers and staff may use the site.	None of the participants reported using this site.
K12, Inc. Online Training Sessions www.k12.com	Tutor	Part of the learning coach resources, these online training programs offer how-to sessions covering topics such as teaching multiple learners.	None of the participants reported in taking part in this online training.
K12, Inc. Teacher Tips	Tutor	Some of the teaching tips presented in the lessons are reflective of the practices you might find a teacher implement in the classroom. For example, in the 1st grade language arts Lesson #2, the teacher tips inform the learning coach	Some of the participants reported using the teaching tips. One of them said she sometimes sang them to her daughter as a way to capture her attention.

		to engage the student in the “writing process,” which includes five stages of writing: prewriting, drafting, revising, proofreading, publishing. In the classroom this procedure is referred to as the writing process.	
K12, Inc. ThinkTank ¹² www.k12.com	Explore	This is part of the K12, Inc. website, where experts share ideas on teaching students.	None of the participants reported using this site.
K12, Inc. Training CDRoms www.k12.com	Tutor	Phonics How-to teach CDRoms	One of the participants said she listened to a few of these but there were too many and she did not have the time to listen to each one of them. She thought just listening to a few was good enough.
Khan Academy www.khanacademy.org	Tutor	Provides 2,700+ instructional videos on math, science, history, English, etc. Also contains practice exercises and a sophisticated assessment and tracking system. Coaches, mentors and teacher can use the site to help their students. The site seeks volunteers to help tutor and mentor its user-students. This site is free.	Two participants described this site as useful: “ <i>Kahn Academy</i> – it’s a really good one for math.” “We’ve used clips from Kahn Academy. Those are cool videos. There is a series of video clips that you can use to explain science.”
Amazon Kindle www.amazon.com	Reward	This mobile reading device provides a tool to	One parent described how the Kindle could be

		read digital textbooks. While there are thousands of books which can be downloaded for free, there is a fee for the device and most digital books	used as a reward to motivate her students to read – “The kids right now are all excited about my Kindle so they want to borrow it to read. That’s one way we thinking we might be able to encourage them to read more.”
Laptop	Tool	A laptop is a portable computer.	Several parents described using a laptop to enable students to do schoolwork while they are on the go. One parent reported how she used the laptop at the library – “And then on Thursday my son goes for a club and at that point my two daughters and I, we go to the library and my oldest daughter will do stuff she has to do on the Mac (Book).”
Mobile Internet Card	Tool	A mobile Internet card is a device that can be plugged into a laptop computer to provide wireless access to the Internet. There is usually a monthly service fee associated with the device.	One parent described the virtues of the mobile Internet card as enabling mobile learning, anywhere, anytime – “And I also have the mobile Internet card so we can be anywhere and pull out some work.”
Multiplication.com www.multiplication.com	Explore	Provides a fun way for students to practice math. It contains interactive math games, multi-player games, how-to teach math guides, and resources for parents and	This site was described by one parent as very useful in helping to enrich or supplement student math learning. She commented – “We use multiplication.com a lot.”

		teachers. The online games and activities are free, however there is a fee for some of the print resources.	
PBSKids.org www.pbskinds.org	Explore	Provides how-to videos and fun interactive learning games for children. The site also has downloaded apps, such as Fetch, an augmented reality app that teaches children math through games. The site is sponsored by the Public Broadcasting Station (PBS). This site is free.	One participant described educational enrichment sites they use – ““We use multiplication.com a lot. We also use Discovery Education, which they do videos and stuff like that. What else do we use? PBS. Kids. That’s about it that I can think of right now.”
Tutor.com www.tutor.com	Tutor	Provides professional tutoring services for a fee. Can be accessed via computer or mobile devices. Services are provided 24/7 in math, English, science, social science. Tutoring takes place in their online classroom accessed via the Internet. The site claims that all tutors are carefully screened, and may be professional teachers, college professors, graduate students, etc. and that they are based in the U.S. or Canada.	One participant described what he and his child do when they are stuck on a problem – “First, we will try online searches. Then, if that doesn’t work, we have a subscription to Tutor.com, although he hasn’t used it much. Teachers are usually the last source just because it can be difficult to contact them.”
Wikipedia	Explore	Provides	Several of the

www.wikipedia.org		<p>encyclopedia-type information on over 20 million topics. Content collaboratively written by volunteers – a.k.a. contributors. This site is run by a non-profit organization and is free to use.</p>	<p>participants reported that they use this site. One participant's comment highlights his awareness over the controversy concerning the validity of information posted on the site -- "He uses Wikipedia a lot for research, although I keep trying to tell him it can be unreliable."</p>
<p>Wolfram Alpha www.wolframalpha.com</p>	<p>Explore</p>	<p>Provides answers to "free form" natural language questions posed by users by doing "dynamic computations" rather than searches. The goal is to "make systematic knowledge available" to anyone. Data is built from outside experts in the fields of science, math, etc. This site is free to use.</p>	<p>One participant described what they do they are stuck – "... the online searches almost always work (he is a big fan of Wolfram Alpha). It's a site where you can type in a question and get an answer if it is in their database. Mostly, statistical data, or solving an equation. For instance, if you want to know the average rainfall in London, you can type the question in and it will give you facts, charts, all sorts of information.</p>
<p>YouTube www.youtube.com</p>	<p>Explore</p>	<p>Contains millions of amateur-produced and professionally produced videos. Some videos are of an academic nature. This site is free.</p>	<p>Every participant described using this site to enrich or supplement student learning: "Another good one that we like to use is <i>YouTube</i> because they have a lot of math and science labs that are done for you." "Well, there is always YouTube. Especially science they have some</p>

			really good videos on YouTube. We make a lot of use on YouTubing and Googling stuff.”
--	--	--	---

APPENDIX E.
SURVEY INSTRUMENT

Survey Instrument

Instructions:

Thanks you for agreeing to take this survey. All participation is completely anonymous and all data will be kept confidential. This survey contains 20 multiple-choice questions and should take about 10 minutes to complete. There is also an optional write-in comment box at the end of the survey should you wish to contribute any additional ideas. Please begin

[Note: This survey was conducted in SurveyMonkey.com]

#1. How many years have you been a learning coach for your children enrolled in a cyber charter school?

- 0-1 year
- 1-3 years
- 3-5 years
- 5-7 year
- 10+ years

#2. If applicable, how many years did you home school your children prior to enrolling them in a cyber charter school?

- 0-1 year
- 1-3 years
- 3-5 years
- 5-7 year
- 10+ years

#3. How would you describe where you live?

- Urban
- Rural
- Suburban

#4. How would you characterize your household?

- Single parent household
- Two parent household
- Other (please specify)

#5. What is your relationship to your children attending the cyber charter school?

- Mother
- Father
- Grandparent

- Guardian
- Other (please specify)

#6. What is your employment status?

- Work full-time
- Work full-time at home
- Work full-time occasionally at home
- Work part time
- Work part time at home
- Work part time occasionally at home
- Not working

#7. If applicable, what is the employment status of your spouse, partner, or the second guardian or care provider in the household?

- Work full-time
- Work full-time at home
- Work full-time occasionally at home
- Work part time
- Work part time at home
- Work part time occasionally at home
- Not working

#8. What is your ethnicity?

- Asian
- Native Hawaiian
- Native American
- Native Alaskan
- African American
- Hispanic
- Caucasian
- Other (please specify)

#9. What is the highest level of school you have completed or the highest degree you have received?

- Less than a high school degree
- High school degree or equivalent (e.g. GED)
- Some other college degree
- Associate degree
- Associate degree plus additional coursework
- Bachelor degree
- Bachelor degree plus additional coursework

- Graduate degree
- Graduate degree plus additional coursework
- Advanced degree (Ph.D., MD, etc.)
- Other (please specify)

#10. If applicable, what is the highest level of school completed by your spouse, partner, or the second guardian or caregiver in the household?

- Less than a high school degree
- High school degree or equivalent (e.g. GED)
- Some other college degree
- Associate degree
- Associate degree plus additional coursework
- Bachelor degree
- Bachelor degree plus additional coursework
- Graduate degree
- Graduate degree plus additional coursework

#11. If applicable, please indicate how many years you have been a teacher in a K-12 or higher education setting

- I have taught 0-1 year
- I have taught 1-3 years
- I have taught 3-5 years
- I have taught 5-10 years
- I have taught 10+ years
- Not applicable

#12. Describe the centrality of religion in your home education practices

- Secular: religion is not part of our home education practices
- Nominal: religion is part of our family life, but is not taught explicitly as part of our home education practices
- Practicing: religion is an important part of family life and some religious instruction is incorporated into our home education
- Active: religion is central to our family life and is taught as a fundamental part of our home education

#13. Please indicate the reason(s) you choose to enroll your children in a cyber charter school: (Check all that apply)

- To provide increased academic opportunities for my children
- To express religious freedom
- To increase the opportunity to instill moral values in my children
- To ensure a safe environment for learning

- To meet the unique learning needs of my children
- To provide my children with individualized learning
- To provide my children with learning at a pace that meets his/her needs
- To have more control over my children's education
- To embrace high expectations of excellence in learning
- To become an effective role model for my children
- To benefit from greater flexibility in scheduling studies
- To avoid some of all traditional school practices
- Other (please specify)

#14. To what extent do you and your family rely on computer and communication technologies to support, facilitate, enable or sustain your home education practices?

- Heavily: We could not educate at home without it
- Moderately: We use some type of computer or communication technologies most days to support schooling at home and we would still school at home without access to technology
- Somewhat: We use computer and/or communication technologies occasionally to support schooling at home
- Minimally: We use computer and/or communication technologies minimally in our household and they are not central to our schooling at home
- Not at all: We do not use computer or communication technologies to support or facilitate schooling at home

#15. Which of the following computer and/or communication technologies do you use to support, facilitate, or enable your schooling at home? (Check all that apply)

- Internet
- Email
- Voice over Internet (e.g. Skype)
- Message boards
- Blogs
- Social networking sites
- Wiki technologies
- Cell phone
- Educational software (other than supplied by the content provider)
- Productivity software (e.g. word processing, etc.)
- Instant messaging
- Online collaboration and communication tools
- Broadcast, cable, satellite TV
- Videos/DVDs
- Streamed media
- MP3/podcasting
- Other (please specify)

#16. In what ways do you tend to use computer and/or communications technologies to school at home? (Check all that apply)

- Network with other home educators and groups
- General administration
- Access curriculum and other education materials
- Assess or evaluate children's progress
- Develop curriculum and other education support materials
- Access supplemental educational materials for remediation/enrichment
- Professional development (for learning coaching)
Deepen my children's learning and understanding
- Access instructors, mentors, tutors for my children
- Access local, state and federal regulatory or legal agencies concerning home education
- Collaborate and/or co-develop activities, lessons or projects
- Communicate with school staff
- Cultivate and support children's social networks and interactions
- Other (please specify)

#17. Who do you turn to for support when you have technical computer related problems? (Check all that apply)

- My spouse, partner or guardian, second care provider
- My children
- My children's teachers
- The school's support technicians
- The content provider's support technicians
- Online how-to modules
- Other learning coaches
- I usually never need help with technical issues
- Other (please specify)

#18. Who do you typically turn to for support when you have content related questions/concerns? (Check all that apply)

- My spouse, partner or guardian, second care provider
- My children's teacher(s)
- The content provider
- Online educational resources and websites
- Other educational resources (not available online)
- Online learning coaches
- Other friends or family members
- No one else
- Other (please specify)

#19. Please indicate the organization you are involved with that supports your efforts as a learning coach (Check all that apply)

- Parent Teacher Association
- Home school group
- Local, state or federal home school organizations
- Religiously base home schooling organizations
- Virtual schooling organizations
- Special educational needs organizations
- Gifted student organizations
- Educational clubs
- University, community college or adult education based group
- None
- Other (please specify)

#20. Please indicate that clubs, organizations, groups or extracurricular activities your children engage with as part of their schooling (Check all that apply)

- School-related educational clubs
- School-related social clubs
- School-related sports/fitness clubs
- Non-School-related educational clubs
- Non-School-related social clubs
- Non-School-related sports/fitness clubs
- Religious clubs
- Art, craft, music clubs
- Other (please specify)

#21. This space is for any comments, ideas or suggestions you wish to share regarding learning coaches or cyber charter schooling. It is optional.

APPENDIX F.

IRB INFORMED CONSENT FORM

**AGREEMENT TO PARTICIPATE
IN A DOCTORAL DISSERTATION RESEARCH STUDY ENTITLED:**

Exploring the Nature of Learning Coaches in Cyber Charter Schools

Investigator: Lisa Hasler Waters, Doctoral Candidate

Faculty Supervisor: Dr. Michael Menchaca

Department: Educational Technology
1776 University Avenue
Wist Hall, Room 232
Honolulu, HI 96822
Office: (808) 956-7671

Purpose of this Research

The purpose of this study is to explore the nature of parents/guardians who are learning coaches for children enrolled in cyber charter schools and to develop a better understanding of the breadth, depth and type of support they provide to their child(ren) enrolled in cyber charter schools. How do learning coaches support their students? How do they perceive their roles? How do they use technology to support their students? What challenges do they face?

What You Will Be Expected to Do

If you agree to participate in this research, you will be asked to do the following things:

1. Allow me to interview you via Skype at least three times, for no longer than 30 minutes per session. This will be done at your convenience and you will not incur any charges.
2. Participate in an online focus group meeting with the other participants involved in this study. This may occur with a private social network site, or a private online meeting space based upon the convenience of all participants. All participants will be reminded of upholding confidentiality and practicing Acceptable Use Policies and netiquette. You will not incur any charges. This meeting will take no longer than one hour.
3. Complete a diary log consisting of one entry per week, over a four-week period. You will be given a weekly prompt from which to complete your log. There is no set limit to your entry. It may be done at your convenience and can be completed as an email message, MS Word document, Twitter feed, or voice-recording using an online application. You will not incur any charges.
4. Complete an online survey, which will be confidential and anonymous. The survey will take you no longer than five-minutes to complete. You will not incur any charges.
5. Be available by email for any checking I may need to do with you as a follow-up to the interview.

6. Once I have made transcripts of the online interviews, you will be provided with a copy for your review. You will be given the opportunity to check for accuracy of facts and intent and to either edit as you wish or accept the transcript as is.

What You Can Expect Me to Do

1. I will maintain your confidentiality throughout the entire research study. I will use pseudonyms to refer to participants within the study. I will do my best to accurately represent all data.
2. Once the study is complete I will provide you with an electronic version upon your request.

Voluntary Participation

Each participant will remain voluntary throughout the entire timeframe of this study and is free to withdraw at any time with no consequences to the individual.

Your Rights

1. To Confidentiality

- Your identity and what is said in interviews, diary logs and the survey will be kept strictly confidential. That is, no person other than the researcher will have access to the interview transcripts, diary logs or the survey. You will be given a personal copy of the transcript of the interviews.
- Before participating in the focus group meeting you will be given the opportunity to create a pseudonym in order to protect your identity. The transcripts from this meeting will not be provided to anyone other than the researcher. If this meeting is held within private social networking site then all text will immediately be removed from the Internet at the end of the focus group meeting and will not be provided to anyone other than the researcher.
- In order to protect participants, the names and other identifying characteristics about any participant in this study will not be divulged to anyone. Each person interviewed will be given a pseudonym in order to provide anonymity.
- Interview transcripts and bio-data information will be used in the dissertation and any other subsequent publications in such a manner so as to protect the participant from identification by the readers.
- All written transcripts (except the one provided to you) will remain in the possession of the researcher in a secure location. The data will be used for the dissertation as well as in materials written for publication. No one will have use of these materials, except the researcher for the purposes of the dissertation and perhaps a follow-up article based upon the research. Transcripts of study participants who prematurely exit the study will also be destroyed.

2. To Ask Questions at Any Time

You may ask questions about the research at any time by contacting me:

By phone: 011 44 2932 42 3017

Skype: [lisa.hasler.waters](https://www.skype.com/user/lisa.hasler.waters)

Email: hasler@hawaii.edu

If I cannot answer your questions, you may contact Dr. Michael Menchaca, my dissertation chair at (808) 956-7671 or via email at mikep@hawaii.edu.

3. To Withdraw at Any Time

You may withdraw from the study at any time, and you may require that your data be destroyed, without any consequences to you.

4. Benefits

Participants will have an opportunity to reflect on the roles they and others play in bringing about and promoting effective learning for children. By sharing information with each other during the focus group meeting, participants may also realize relevant tips and methods for working with their child(ren) as they engage in the cyber charter environment.

The contributions to the field of education will also be very important as there are limited numbers of studies about cyber charter schooling devoted primarily to the viewpoints of parents and/or guardians as learning coaches. The reflections of the participants may provide valuable insights to other learning coaches, teachers, administrators and researchers, informing both theory and practice.

5. Possible Risks

To the knowledge of this researcher, there are no risks involved in this study.

Thank you very much for your time and assistance.

Certification

I certify that I have read and understand the above, that I have been given satisfactory answers to any questions about the research, and that I have been advised that I am free to withdraw my consent and to discontinue participation in the research at any time, without any prejudice or other consequences.

I agree to be a part of this study with the understanding that such permission does not take away any of my legal rights, nor does it release the investigator or the institution (or any agent or employee thereof) from liability for negligence.

If I cannot obtain satisfactory answers to my questions, or have comments or complaints about my participation in this study, I may contact:

Committee on Human Studies
1960 East-West Road
Biomedical Building, Room B-104
Honolulu, HI 96822
Phone: 808.956.5007 / Email: uhirb@hawaii.edu

Name of Participant

Signature of Participant

Date

c: Signed copy to participant

APPENDIX G.

CURRICLUM SUPPORT MATERIALS

Curriculum Support Materials Available for Learning Coaches from K12, Inc.

Item	Description	Example from Lesson Materials
Student Help	Shows alternative ways to teach the material	Math K: “if your child is having difficulty remembering the subtraction facts in her head while she finds the differences, let her use paper and pencil to write the problems down”
Instructions	Steps or processes that are procedural, and may provide a script	Math K: “Point to the first number in each subtraction fact. Say, “We’ll start by looking at the wholes. Do you see that the whole increases by 1 in each problem?”
Teaching Tips	Suggestions about “how to teach” or pedagogical, and may include how to reinforce	1 st Language Arts: Engage the student in the <i>writing process</i> , which includes five stages of writing: prewriting, drafting, revising, proofreading, publishing. K & 1 st L. Arts: Shared Reading Guidelines provide step-by-step procedures for how to teach reading. Uses a guided phonics program called PhonicsWorks. This kit contains DVDs, guidebooks and manipulatives. The DVDs provide clear directions on how to teach phonics and provide instructions on when and how to remediate.
Teaching Tips	Procedural	Math 3: “If a hand-held mirror is available, have your student place it along the line of symmetry of each shape in the display to show that symmetrical halves are mirror images.”
Teaching Tips	Procedural	7 th Math: “Most likely, your student will find the material in this lesson to be straightforward. Make sure your student understands the less concept of one-to-one correspondence between a point in the plan and a pair of real numbers.”
Teaching Tips	Procedural	6 th -8 th Science: “Make sure that the student read through the review section and watched the animations. “Please supervise your student during this activity and help when needed.”
Skills Update	Offered in most math lessons giving student opportunity to remediate	These are typically online, interactive activities that the student can engage in by himself.
Tests	Tests are given at the end of each lesson.	Learning coach is responsible for seeing that the student correctly answers questions or completes the work. Some are student-driven, others require parent to ask student questions then check off the boxes online to indicate if the student passed/failed.
Optional Activities	Alternative activities to provide opportunities to reinforce the content learned	7 th Language Arts: “Beyond the Lesson, All the World’s a Stage – you may wish to have your student view the websites listed below. They offer additional information and resources on Shakespeare and his work.” 3 rd History: “Beyond the Lesson: Gutenberg’s printing press” The student carves letter shapes into potato pieces and stamps them into paint to explore printing

REFERENCES

- Ahn, J. (2011). Policy, technology, and practice in cyber charter schools: Framing the issues. *Teachers College Record*, 113(1), 1-26.
- Ambient Insight. (2011). *Learning Technology Research Taxonomy*. (2011). Monroe, WA: Ambient Insight.
- Andrade, A. G. (2008). *An exploratory study of the role of technology in the rise of homeschooling*. Unpublished Dissertation, Ohio University, Athens, OH.
- Anthony, G., & Walshaw, M. (2009). *Effective pedagogy in mathematics* (Vol. 19): International Academy of Education.
- Archambault, L., & Crippen, K. (2009). Examining TPACK among K-12 online distance educators in the United States. *Contemporary Issues in Technology and Teacher Education*, 9(1), 71-88.
- Ash, K. (2010). Blended learning seeks the right mix. *Education Week*, 30(4), S8-S9.
- Bacon, D. (2012). Morals and the machine. *The Economist*.
- Barajas, M., & Owen, M. (2000). Implementing virtual learning environments: Looking for holistic approach. *Educational Technology & Society*, 3(3), 39-52.
- Barbour, M., K., & Mulcahy, D. (2004). The role of mediating teachers in Newfoundland's new model of distance education. *The Morning Watch*, 32(1-2).
- Barbour, M. K., & Reeves, T. C. (2009). The reality of virtual schools: A review of the literature. *Computers and Education*, 52, 402-416.
- Barbour, R. S., & Schostak, J. (Eds.). (2004). *Interviewing and focus groups*. Thousand Oaks, CA: Sage Publications, Inc.
- Barth, P., Hull, J., & st. Andrie, R. (2012). *Searching for the reality of virtual schools*: Center for Public Education, National School Boards Association.
- Bauman, K. J. (2001). *Home schooling trends in the United States: Trends and characteristics*. Washington, D.C.: U.S. Census Bureau.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monograph*, 4(1-101).

- Black, E. W. (2009). *An evaluation of familial involvements' influence on student achievement in K–12 virtual schooling*. Unpublished Dissertation, University of Florida, Gainesville, FL.
- Black, L. M. (2007). A history of scholarship. In M. G. Moore (Ed.), *The Handbook of Distance Education* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001). *Focus groups in social research*. Thousand Oaks, CA: Sage.
- Bogden, J. (2003). Cyber charter schools: A new breed in the educational corral. *The State Education Standard*(Autumn 2003), 33-37.
- Borup, J. (2012). *The nature of parental interactions in an online charter school*. Unpublished dissertation. Brigham Young University, Provo, UT.
- Borup, J., Graham, C. R., & Davies, R. (2011). The impact of parental interaction on student outcomes in a virtual high school. In *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2011* (pp. 2315-2323). Chesapeake, VA: AACE.
- Boulton, H. (2008). Managing e-learning: What are the real implications for schools? *The Electronic Journal of e-Learning*, 6(1), 11-18.
- Bracey, G. (2004). Knowledge Universe and virtual schools: Educational breakthrough or digital raid on the public treasury? Retrieved from <http://epsl.asu.edu/epru/documents/EPSSL-0404-118-EPRU.pdf>
- Bronfenbrenner, U. (1986). Ecology of the family as context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723-742.
- Bronfenbrenner, U. (Ed.) (1994) *International Encyclopedia of Education* (2nd ed., Vols. 3). Oxford, England: Elsevier.
- Brooks, J. G., & Brooks, M. G. (1993). *In search of understanding: The case for constructivist classrooms*. Alexandria, VA: Association of Supervision on Curriculum Development.
- Brown, J., Seely, Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42.
- Buchanan, E. A. (2000). Ethics, qualitative research and ethnography in virtual space. *Journal of Information Ethics* (Fall 2000), 82-87.

- Buddin, R., & Zimmer, R. (2005). Student achievement in charter schools: A complex picture. *Journal of Policy Analysis and Management*, 24(2), 351-371.
- Butler, K. (2010). Logging on to learn. *DistrictAdministration*.
- Cai, Y., Reeve, J., & Robinson, D. T. (2002). Home schooling and teaching style: Comparing the motivating styles of home school and public school teachers. *Journal of Educational Psychology*, 94(2), 372-280.
- Carr-Chellman, A. A. (2009). An introduction to this special issue of TechTrends. *TechTrends*, 53(4), 3-4.
- Carr-Chellman, A. A., & Marsh, R. M. (2009). Pennsylvania cyber school funding: Follow the money. *TechTrends*, 53(4), 49-55.
- Cavanaugh, C. (2009). Effectiveness of cyber charter schools: A review of research on learnings. *TechTrends*, 53(4), 28-32.
- Cavanaugh, C., Gillan, K. J., Kromrey, J., Hess, M., & Blomeyer, R. (2004). The effects of distance education on K-12: A meta-analysis. Retrieved from <http://education.ufl.edu/faculty/cathycavanaugh/docs/EffectsDLonK-12Students1.pdf>.
- Center for Education Reform. (2011). National Charter School Directory. Retrieved from [http://www.edreform.com/in-the-states/find-a-charter-school/?filter\[name\]=&filter\[city\]=&filter\[state\]=HI&filter\[specialty\]=virtual&filter\[type\]=any](http://www.edreform.com/in-the-states/find-a-charter-school/?filter[name]=&filter[city]=&filter[state]=HI&filter[specialty]=virtual&filter[type]=any).
- Center for Research on Education Outcomes. (2011). *Charter school performance in Pennsylvania*. (2011). CREDO, Stanford University.
- Christensen, C. M., Horn, M. B., & Johnson, C. W. (2008). *Disrupting class: How disruptive innovation will change the way the world learns*. New York, NY: McGraw-Hill.
- Clark, T. (2001). *Virtual schools: Trends and isuses -- A study of virtual schools in the United States*. San Francisco, CA: Western Regional Educational Laboratories.
- Clark, T. (2003). Virtual and distance education in American schools. In M. G. Moore (Ed.), *Handbook of Distance Education* (pp. 763-701). London: Lawrence Erlbaum Associates.
- Clements, A. D. (2002). Variety of teaching methodologies used by home schoolers: Case studies of three homeschooling families. Paper presented at the *Annual Meeting of Eastern Educational Research Association* 2002. Sarasota, FL.

- Connections Academy. (2011). Connections Academy ratings and results. Retrieved from <http://www.connectionsacademy.com/proven-results/ratings-results.aspx>
- Cory-Wright, J. (2011). Learner centric design - A new frontier? *Training Journal*, (February 2011). Retrieved from <http://www.trainingjournal.com/magazine/magazines-magazine-2011-02-training-journal-magazine/>
- Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Creswell, J. W., & Plano, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage.
- Crook, C., & Cluley, R. (2009). The teaching voice on the learning platform: Seeking classroom climates within a virtual learning environment. *Learning, Media and Technology*, 34(3), 199-213.
- Darling, K. (2012). Extending the rights social robots. Paper presented at *We Robot Conference 2012*. Miami, FL.
- Darrow, R. (2010). *A comparative study between online charter high schools and traditional high schools in California*. Unpublished Dissertation. Fresno State University, Fresno, CA.
- Davenport, A. M. (2001). *Homeschooling: A descriptive study of educational practice and climate in selected readings*. Unpublished Dissertation, Seton Hall University, New York, NY.
- David, J. L. (1994). Realizing the promise of technology: A policy perspective. In B. Means (Ed.), *Technology and Education Reform* (pp. 169-190). San Francisco, CA: Jossey-Bass.
- Davis, M. R. (2011). Does full-time virtual ed. exclude certain students? *Education Week Digital Directions*, 4(2), 46 -48.
- Davis, N. E., & Niederhauser, D. S. (2007). Virtual schooling. *Learning and Leading with Technology*, April.
- Denzin, N. K., & Lincoln, Y. (2000). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd ed., pp. 1-29). Thousand Oaks, CA: Sage Publications, Inc.

- Desforges, C., & Abouchaar, A. (2003). *The impact of parental involvement, parental support and family education on pupil achievement and adjustment: A literature review*: Department for Education and Skills.
- Deslandes, R., & Bertrand, R. (2005). Motivation of parent involvement in secondary-level schooling. *The Journal of Educational Research*, 98(3), 164-175.
- Dettmer, M., Schmundt, H., & Tietz, J. (2012). Blessing or curse? Competing visions of a computer-controlled future. *SpiegelOnline*. Retrieved from <http://www.spiegel.de/international/business/blessing-or-curse-competing-visions-of-a-computer-controlled-future-a-819825-druck.html>
- DiPetro, M., Ferdig, R. E., Black, E. W., & Preston, M. (2008). Best practices in teaching K-12 online: Lessons learned from Michigan Virtual School teachers. *Journal of Interactive Online Learning*, 7(1), 10-35.
- Dornbusch, S. M., Ritter, P. L., Leiderman, H., Roberts, D. F., & Faraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development*, 58, 1244-1257.
- Eccles, J. S., & Harold, R. D. (1993). Parent-school involvement during the early adolescent years. *Teachers College Record*, 94(3), 568-587.
- EducationWeek. (2011). Charter Schools. Retrieved from www.edweek.org/ew/issues/charter-schools
- Emerson, R. M., Fretz, R. I., & Shaw, L. L. (1995). *Writing ethnographic fieldnotes*. Chicago, IL: The University of Chicago Press.
- Epstein, J. L. (1986). Parents' reactions to teacher practices of parent involvement. *The Elementary School Journal*, 86(3), 277-294.
- Epstein, J. L. (1991). What we can learn from federal, state, district and school initiatives. *Phi Delta Kappan*, 72(5), 244-349.
- Epstein, J. L. (1995). School, family, community partnerships: Caring for the children we share. *Phi Delta Kappan*, 76(9), 701-713.
- Epstein, J. L. (2005). Attainable goals? The spirit and the letter of No Child Left Behind Act on Parental Involvement. *Sociology of education*, 78(2), 179-182.
- Erb, R. E. (2004). *From traditional public school to cyber charter: How parents decide*. Pennsylvania State University, Pennsylvania.

- Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*, 13(1), 1-22.
- Flick, U. (2009). *An introduction to qualitative research* (4th ed.). London, England: Sage.
- Freedman, G. (2005). Virtual schools: Technology and transformation. In Z. L. Berge & T. Clark (Eds.), *Virtual schools: Planning for success* (pp. 35-45). New York, NY: Teachers College Press.
- Frey, B. (2005). A virtual school principal's to-do list. *THE Journal*, 32(6), 34-36.
- Gerber, S. B., & Finn, J. D. (2001). Teacher aides and students' academic achievement. *Educational Evaluation and Policy Analysis*, 23(2), 123-143.
- Gilbert, C. (2006). *Teaching and learning in 2020 review*. Nottingham, UK: Department for Education and Skills (DfES).
- Gillespie, Helena, Boulton, H., Hramiak, A. J., & Williamson, R. (2007). *Learning and teaching with virtual learning environments*. Exeter, UK: Learning Matters Ltd.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of ground theory: Strategies for qualitative research*. Chicago, IL: Aldine.
- Glass, G. V., & Welner, K. G. (2011). Online K-12 schooling in the U.S.: Uncertain private ventures in need of public regulation. Retrieved from <http://nepc.colorado.edu/publication/online--k--12--schooling>.
- Green, C., L., & Walker, J. M. T. (2007). Parents' motivation for involvement in children's education: An empirical test of a theoretical model of parental involvement. *Journal of Psychology*, 99(3), 532-544.
- Hahn, C. (2008). *Doing qualitative research using your computer: A practical guide*. Thousand Oaks, CA: Sage.
- Hasler-Waters, L., & Leong, P. (2010). Disrupting the brick and mortar syndrome: Practices of a hybrid cyber charter school. University of Hawaii.
- Hawaii News Now. (2012). Fired head of state's largest charter school under scrutiny for spending. (2012). *Hawaii News Now*. Retrieved from <http://www.hawaiinewsnow.com/story/16975697/hta-investigation>
- Hawkins, A. (2011). *We're definitely on our own: Interaction and Disconnection in a Virtual High School*. Unpublished dissertation, Brigham Young University.

- Henn, M., Weinstein, M., & Foard, N. (2006). *A short introduction to social research*. London, England: Sage.
- Herman, J. L. (1994). Evaluating the effects of technology in school reform. In B. Means (Ed.), *Technology and Education Reform* (pp. 133-168). San Francisco, CA: Jossey-Bass.
- Higgins, C. (2008). *Pilot study: Homeschooling parents' motivations and pedagogy*. Humboldt State University, Humboldt, CA.
- Honolulu Civil Beat. (2012). Abuse, waste and fraud may have happened at Hawaii's largest charter school. *Honolulu Civil Beat*. Retrieved from <http://hawaii.education.blogs.civilbeat.com/post/18030994713/abuse-waste-and-fraud-may-have-happened-at-hawaiiis>
- Hoover-Dempsey, K., V., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, 67(1), 30-42.
- Hoover-Dempsey, K. V., & Sandler, H. M. (1995). Parental involvement in children's education: Why does it make a difference? *Teachers College Record*, 97(2), 310-331.
- Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins., A. S., et al. (2005a). *Final performance report for OERI Grant #R305T010673: The social context of parental involvement: A path to enhanced achievement*: Institute of Educational Sciences, U.S. Department of Education.
- Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins., A. S., et al. (2005b). Why do parents become involved? Research findings and implications. *Elementary School Journal*, 106(2)., 105-130.
- Horn, M. B., & Staker, H. (2011). *The rise of K-12 blended learning*: Innosight Institute.
- Hubbard, B., & Mitchell, N. (2011a) Online K-12 schools failing students but keeping tax dollars. *I-News Network*. Retrieved from <http://www.inewsnetwork.org/special-reports/online-k-12-schools/>
- Hubbard, B., & Mitchell, N. (2011b). Troubling questions about online education. *EdNews Colorado*. Retrieved from <http://www.ednewscolorado.org/2011/10/02/25310-analysis-shows-half-of-online-students-leave-programs-within-a-year-but-funding-stays> see also: <http://www.inewsnetwork.org/special-reports/online-k-12-schools/>
- Huber, E. (2003). Unexplored territory: Writing instruction in Pennsylvania homeschool settings, grades 9-12. *Home School Researcher*, 15(4), 1-10.

- Huerta, L. A., Gonzáles, M.-F., & d'Entremont, C. (2006). Cyber and home school charter schools: Adopting policy to new forms of public schooling. *Peabody Journal of Education*, 81(1), 103-139.
- Huerta, L. A., & Gonzáles, M. F. (2004). Cyber and home school charter schools: How states are defining new forms of public schooling. Retrieved January 15, 2011, from <http://epsl.asu.edu/epru/articles/EPRU-0401-49-OWI.htm>
- Hyldegård, J. (2006). Using diaries in group based information behavior research: A methodological study. Paper presented at the *The First International Conference on Information Interaction in Context* (2006). New York, NY: ACM.
- International Association for K-12 Online Learning. (2011). Fast facts about online learning. Retrieved January 11, 2009, from <http://www.inacol.org/resources>
- Jeynes, W. H. (2010). *Parental involvement and academic success*. New York, NY: Routledge.
- K12, Inc. (2011). K12 produces results. Retrieved from <http://www.k12.com/what-is-k12/results>
- K12., Inc. (2009) Role players: The journey from learning coach to mentor. *XPotential: Learning Without Barriers*.
- Klein, C. (2006). *Virtual charter schools and home schooling*. Youngstown, NY: Cambria Press.
- KnowledgeWorks Foundation. (2012). 2020 forecast: Creating the future of learning. Retrieved from <http://www.futureofed.org>
- Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy, Revised and Updated*. New York, New York: Association Press.
- Knupfer, N. N., & McLellan, H. (1996). Descriptive research methodologies. In D. H. Jonassen (Ed.), *Handbook for Research for Educational Communications and Technology* (pp. 1196-1212). New York, NY: MacMillan.
- Kozma, R., Zucker, A., Espinoza, C., McGhee, R., Yarnall, L., Zalles, D., et al. (2000). *The online experience: Evaluation of the Virtual High School's third year of implementation, 1999-2000*. Hudson, MA: Center for Technology in Learning at SRI International.

- Lacity, M. C., & Janson, M. A. (1994). Understanding qualitative data: A framework of text analysis methods *Journal of Management Information Systems*, 11(2), 137-156.
- Lareau, A. (2011). *Unequal Childhoods: Class, Race and Family Life* (2nd ed.). Berkeley, CA: University of California Press.
- Lareau, A., & Horvat, E. M. (1999). Moments of social inclusion and exclusion race, class and cultural capital in family-school relationships. *Sociology of education*, 72(1), 37-53.
- Layton, L., & Brown, E. (2011, November 26, 2011). Virtual schools are multiplying but some question their educational value. *The Washington Post*. Retrieved from http://www.washingtonpost.com/local/education/virtual-schools-are-multiplying-but-some-question-their-educational-value/2011/11/22/gIQANUzkzN_print.html
- Lincoln, Y. S., & Guba, E. G. (2002). Judging the quality of case study reports. In M. A. Huberman & M. B. Miles (Eds.), *The Qualitative Researcher's Companion* (pp. 205-216). Thousand Oaks, CA: Sage.
- Lines, P. M. (2000). Homeschooling comes of age. *Public Interest*, 140(Summer 2000), 74-85.
- Litke, D. (1998). Virtual schooling at the middle grades: A case study. *The Journal of Distance Education*, 13(2), 33-50.
- Liu, F., Black, E., Algina, J., Cavanaugh, C., & Dawson, K. (2010). The validation of one parental involvement measurement in virtual schooling. *Journal of Interactive Online Learning*, 9(2), 105-132.
- Lofland, J., Snow, D., Anderson, L., & Lofland, L. H. (2006). *Analyzing social settings: A guide to qualitative observation and analysis* (4th ed.). Belmont, CA: Wadsworth.
- Lyons, D. (2012). Don't be scared, it's only a robot. *Newsweek*, p. 26.
- Mack, N., Woodsong, C., MacQueen, K., M., Guest, G., & Namey, E. (2005). *Qualitative research methods: A data collector's field guide*. Research Park Triangle, NC: Family Health International.
- Markham, A. N. (2007). The methods, politics, and ethics of representation in online ethnography. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed., pp. 793-820). Thousands Oaks, CA: Sage.

- Martinez-Pons, M. (1996). Test of model parental inducement of academic self-regulation *Journal of Experimental Education*, 64(e), 213-225.
- Mattingley, D. J., Prislin, R., McKenzie, T. L., Rodriguez, J. L., & Kayzar, B. (2002). Evaluating evaluations: The case of parent involvement programmes. *Review of Educational Research*, 72(4), 549-576.
- Maxwell, J. A. (2009). Designing a qualitative study. In L. Bickman & D. J. Rog (Eds.), *The SAGE Handbook of Applied Social Research Methods* (2nd ed., pp. 214-253). Thousand Oaks, CA: Sage.
- Mayring, P. (2007). On generalization in qualitatively oriented research. *Forum: Qualitative Social Research*, 8(3), 1-9.
- McCluskey, N. (2002). Beyond brick and mortar: Cyber charter revolutionizing education. Retrieved from <http://www.edreform.com>
- McKeon, C., C. (2007). *A mixed methods nested analysis of homeschooling styles, instructional practices, and reading methodologies*. Unpublished Dissertation. Capella University.
- Means, B. (1994). Introduction: Using technology to advance educational goals. In B. Means (Ed.), *Technology and Education Reform: The Reality Behind the Promise* (pp. 232). San Francisco, CA: Jossey-Bass.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*: U. S. Department of Education
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.
- Miles, M. B., & Huberman, M. A. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.
- Miron, G., Urschel, J. L., Yat-Augular, M. A., & Dailey, B. (2012). *Profiles of for-profit and nonprofit education management organizations: Thirteenth annual report - 2010-2011*. Boulder, CO: National Education Policy Center.
- Molenda, M. (2007). Historical foundations. In M. Spector, J., M. D. Merrill, J. van Merriënboer & M. P. Driscoll (Eds.), *Handbook of Research on Educational Communications and Technology* (3rd ed., pp. 3-20). New York, NY: Routledge.
- Moore, M. G. (1973). Toward a theory of independent learning and teaching. *Journal of Higher Education*, XLIV(12), 661-679.

- Mueller, J. (2012). Authentic Assessment. North Central College, Naperville, IL. Retrieved from <http://jfmuellet.faculty.noctrl.edu/toolbox/whatisit.htm>
- Murphy, E., & Rodriguez-Manzanares, M. A. (2009). Research on the e-teacher in the K-12 distance education classroom. Retrieved from www.uccs.mun.ca/~emurphy/encycloentry.pdf
- National Center for Educational Statistics (2011). *Hawaii Public Schools*. National Center for Educational Statistics, Institute of Education Sciences.
- Newmann, F. M., & Wehlage, G. G. (1993). Five standards of authentic instruction. *Educational Leadership*, 50, 8-12.
- Office of the Legislative Auditor, State of Minnesota. (2011). *Evaluation report summary: K-12 online learning*. Minnesota: Office of the Legislative Auditor, State of Minnesota.
- Ohanian, S. (2004). The K12 virtual primary school history curriculum: A participant's-eye view. Retrieved from <http://epsl.asu.edu/epru/documents/EPSTL-0404-117-EPRU.pdf>
- Palen, L., & Salzman, M. (2002). Voice-mail diary studies for naturalistic data capture under mobile conditions. Paper presented at the *2002 Conference on Computer Supported Cooperative Work*, New York, NY: CSCW.
- Partnership for 21st Skills. (2004). Learning for the 21st century: A report and mile guide for 21st century skills. from <http://www.21stcenturyskills.org>
- Patrick, S. (2011). iNACOL Virtual School Symposium. Paper presented at the *Empowered to perform: Online and Blended Learning Models*, Indianapolis, IN: iNACOL.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Pea, R. (2010). Developments in the learning sciences and technologies. Paper presented at the *LPCH Leadership Forum, 2010*. Stanford, CA.
- Phan, K. (2008). *Virtual Charter Schools: Legislative Brief 08-6*. Madison, WI: Legislative Reference Bureau.
- Picciano, A., G., & Seaman, J. (2007). *K-12 online learning: A survey of U.S. school district administrators*: Sloan-Consortium (Sloan-C).

- Pink, D. (2005). *A whole new mind: Why right-brainers will rule the future*. New York, NY: Penguin Group.
- Prensky, M. (2001). *Digital natives, digital immigrants*. Retrieved from: <http://www.marcprensky.com/writing/>
- Prensky, M. (2008). Young minds, fast times: The Twenty-First Century digital learner. Retrieved from <http://www.edutopia.org/print/5491>
- Queen, B., & Lewis, L. (2011). *Distance education courses for public and elementary and secondary school students: 2009-10*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Ray, B. D. (2004). *Home educated and now adults: Their community and civic involvement, views about homeschooling, and other traits*. Salem, OR: National Home Education Research Institute.
- Ray, B. D. (2010). Academic achievement and demographic traits of homeschool students: A nationwide study. *Academic Leadership*, 8(1).
- Ray, B. D. (2011). *2.04 million homeschool students in the United States in 2010*: National Home Education Research Institute (NHERI).
- Revenaugh, M. (2005). K-8 virtual schools: A glimpse into the future. *Learning in the Digital Age*, 63(4), 60-64.
- Rice, K. (2006). A comprehensive look at distance education in the K-12 context. *Journal of Research in Technology in Education*, 38(Summer 2006), 425-448.
- Robinson, K., & Aronica, L. (2009). *The element: How finding your passion changes everything*. New York, NY: Penguin Books.
- Roblyer, M. D. (2005). Educational technology research that makes a difference: Series introduction. *Contemporary Issues in Technology and Teacher Education*, 5(2), 192-201.
- Rocco, T., S., Bliss, L. A., Gallagher, S., Perez-Prado, A., Alacaci, C., Dwyer, E. S., et al. (Eds.). (2003). *The pragmatic and didactical lenses: Two views of mixed methods use in education*. Thousand Oaks, CA: Sage.
- Rodham, K., & Gavin, J. (2006). The ethics of using the Internet to collect qualitative research data. *Research Ethics Review*, 2(3), 92-97.
- Rotherham, A. J., & Willingham, D. (2009). 21st century skills: The challenges ahead. *Educational Leadership*, 67(1), 8-15.

- Rudner, L. M. (1999). *The scholastic achievement and demographic characteristics of home school students in 1998*. College Park, MD: ERIC Clearinghouse on Assessment and Evaluation, College of Library and Information Services, University of Maryland.
- Russell, G. (2004). Virtual schools: A critical view. In C. Cavanaugh (Ed.), *Development and Management of Virtual Schools: Issues and Trends* (pp. 1-26): Idea Group, Inc.
- Ryman, A., & Kossan, P. (Producer). (2011) The race to online: Arizona experiments with virtual K-12 schools. Will they work for your child? *Arizona Republic*. retrieved from <http://www.azcentral.com/news/education/online-school/>
- Sade-Beck, L. (2004). Internet ethnography: Online and offline. *International Journal of Qualitative Methods*, 3(2), 45-51.
- Salkind, N. J. (2008). *Statistics for people who (think they) hate statistics* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Saul, S. (2011, December 12, 2011). Profits and questions at online charter schools. *The New York Times*.
- Schaffhauser, D. (2012). Virtual schools come under scrutiny. *THE Journal*. Retrieved from <http://thejournal.com/Articles/2012/05/15/Virtual-Schools-Come-Under-Scrutiny.aspx?=-THENU&Page=2>
- Schlosser, L. A., & Simonson, M. (2005). Distance education: Towards a definition and glossary of terms Available from <http://www.aect.org/Intranet/Publications/Disted/Disted.asp>
- Schram, T., H. (2006). *Conceptualizing and proposing qualitative research* (2nd ed.). Columbus, OH: Pearson Merrill Prentice Hall.
- Silva, E. (2008). *Measuring skills for the 21st century*. Washington, DC: The Education Sector.
- Smith, R., Clark, T., & Blomeyer, R. (2005). A synthesis of new research on K-12 online learning. Retrieved from <http://www.ncrel.org/tech/synthesis/synthesis.pdf>
- Spelling, M. (2008). *Harnessing innovation to support students success: Using technology to personalize education*. Washington, DC: Office of the Secretary, U.S. Department of Education.
- Stake, R., E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

- Stake, R., E. (2000). Case studies. In N. K. Denzin & Y. Lincoln, S. (Eds.), *Handbook of Qualitative Research* (2d ed., pp. 435-454). Thousand Oaks, CA: Sage.
- Staker, H. (2011). *The rise of K-12 blended learning: Profiles of emerging models*. San Francisco, CA: Innosite Institute.
- State of Hawaii Department of Education. (2012). School status and improvement report. Accountability Resource Center Hawaii. Retrieved from <http://doe.k12.hi.us/index.html>
- Strauss, A. L., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing a grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.
- Stuiber, P., Strom-Hiorns, K., Kleidon, B., LaTarte, A., & Martin, J. (2010). *An evaluation: Virtual charter schools*. Wisconsin: State of Wisconsin: 2009-2010 Joint Legislative Audit Committee.
- Sui-Chu, E. H., & Willms, J. D. (1996). Effects of parental involvement on eighth-grade achievement. *Sociology of Education*, 69(April), 126-141.
- Tashakkori, A., & Teddlie, C. (Eds.). (2003). *Handbook of Mixed Methods Research in Social & Behavioral Research*. Thousand Oaks, CA: Sage.
- Toshalis, E., & Nakkula, M. J. (2012). Motivation, engagement and student voice. Jobs for the Future Project, Students at the Center. Retrieved from, <http://www.studentsatthecenter.org>
- Troop, D. (2012). Robots at war: Scholars debate the ethical issues. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/Moral-Robots-the-Future-of/134240/>
- Tucker, B. (2007). *Laboratories of reform: Virtual high schools and innovation in public education*: Education Sector.
- Turney, L., & Pocknee, C. (2005). Virtual focus groups: New frontiers in research. *International Journal of Qualitative Methods*, 4(2).
- Underwood, J., Baguley, T., Banyard, P., Coyne, E., Farrington, L., Selwood, F., et al. (2007). *Impact 2007: Personalising learning with technology*. British Educational Communications and Technology Agency (Becta).
- Van Dusen, C. (2009). Beyond virtual schools. *eSchool News*(November/December 2009).

- Van Galen, J. A. (1988). Ideology, curriculum and pedagogy in home education. *Education and Urban Society*, 21, 52-68.
- Vergari, S. (2009). *Charter school policy issues and research questions*. New York, NY: Routledge.
- Verpoorten, D., Glahn, C., Kravcik, M., Ternier, S., & Specht, M. (Eds.). (2009). *Personalisation of learning in virtual learning environments* (Vol. 5794): Springer, Heidelberg.
- Vervoorn, J., & van Haren, R. (2012). Scaffolding learning. Retrieved from <http://www.myread.org>
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Walker, J. M. T., Wilkins, A. S., Dallaire, J. R., Sandler, H. M., & Hoover-Dempsey, K., V. (2005). Parental involvement: Model revision through scale development. *The Elementary School Journal*, 106(2), 85-103.
- Watson, J. (2005). *Keeping the pace with K-12 online learning: A review of state-level policy and practice*. Naperville, IL: Learning Point Associates.
- Watson, J. (2007). *A national primer on K-12 online learning*: North American Council for Online Learning.
- Watson, J. (2008). *Blended learning: The convergence of online and face-to-face education*: North American Council for Online Learning.
- Watson, J., Gemin, B., Ryan, J., & Wicks, M. (2009). *Keeping the pace with K-12 online learning: An annual review of state-level policy and practice*: Evergreen Education Group.
- Watson, J., Murin, A., Vashaw, L., Gemin, B., & Rapp, C. (2011). *Keeping the pace with K-12 online learning: An annual review of policy and practice*: Evergreen Education Group.
- Watson, J. F., Winograd, K., & Kalmon, S. (2004). *Education evolution: The need to keep pace with development of K-12 online learning*: Learning Point Associates; North Central Regional Education Laboratory.
- Weiner, C. (2003). Key ingredients to online learning: Adolescent students study in cyberspace. *International Journal on E-Learning*, 2(3), 44-50.

- Weiss, R. S. (1994). *Learning from strangers: The art and method of qualitative interview studies*. New York, NY: The Free Press.
- White House. (2001). *No child left behind*. Retrieved from <http://www2.ed.gov/policy/elsec/leg/esea02/pg107.html>.
- White House. (2011). *Race to the Top*. Retrieved from: <http://www2.ed.gov/programs/racetothetop/index.html>
- Wiggins, G. P., & McTighe, J. (2006). [Examining the teaching life](#). *Educational Leadership*, 63, 26-29.
- Wisconsin Department of Public Instruction. (2010). *An evaluation: Virtual charter schools*. Madison, WI.
- Yin, R. K. (2004). *Case study research: Design and methods* (Vol. 5). Thousand Oaks, CA: Sage.
- Zellman, G. L., & Waterman, J. M. (1998). Understanding the impact of parent school involvement on children's educational outcomes. *The Journal of Educational Research*, 91(6), 370-380.
- Zimmer, R., Gill, B., Booker, K., Lavertu, S., Sass, T. R., & Witte, J. (2009). *Charter schools in eighth states: Effects on achievement, attainment, integration and competition*. Santa Monica, CA: Rand Corporation.