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An Exploratory Study of Parent Involvement in Church Schools in Tonga

Matthew B. Pope
Brigham Young University

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Matthew B. Pope

A dissertation submitted to the faculty of
Brigham Young University
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Doctor of Education

E. Vance Randall, Chair
Donald Baum
Michael A. Owens
W. Bryan Bowles
Scott E. Ferrin

Department of Educational Leadership and Foundations

Brigham Young University

ABSTRACT

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Matthew B. Pope
Department of Educational Leadership and Foundations, BYU
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The majority of research about parent involvement and family engagement indicates a positive relationship between parent involvement and student achievement. However, parent involvement as a useful strategy in education in developing countries is not well known, let alone researched. Until the current study no research has been published specifically about the types and frequency of family engagement in Tonga. This means there is no frame of reference for teachers, administrators and parents in Tonga to evaluate the applicability of existing family engagement research which has been predominantly conducted in developed countries, to schools in Tonga.

This research is a descriptive, exploratory study to understand parent involvement in Tonga from the perspective of Tongan parents and teachers. The guiding framework was developed by Hoover-Dempsey and Sandler (1995) who identified three key constructs that influence parents' decisions for involvement – parent motivational beliefs, invitations to be involved, and life context variables. Quantitative and qualitative methods were used to gather and analyze data that were gathered from teachers (n=88) and parents (n=503) during focus groups and surveys at four schools that are owned and operated by The Church of Jesus Christ of Latter-day Saints in Tonga. The overarching desire was to understand why parents make the choices they do about the types and frequency of their involvement.

Factor analysis and reliability tests supported the use of the selected survey instruments in this study. Some findings were similar to those found in research in developed countries including the way Tongan parents and teachers defined what parent involvement is. Further research could identify parent involvement behaviors that are particularly relevant in Tonga which improve student achievement

Although the schools involved in this study are English speaking schools, language did not appear to be a strong barrier or enabler for parent involvement. However, a strong culture of respect and duty was repeatedly mentioned as potentially inhibiting parent involvement. Invitations appear to play a significant positive role in promoting parent involvement and may help mitigate parents' reluctance to participate. Encouraging and training teachers to extend effective invitations to parents which include specific suggestions for involvement may help increase the frequency of parent involvement.

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And finally, I offer grateful thanks to my God, who has blessed me with a love of learning. He is the greatest example of an involved parent. His inspiration motivated me to begin this journey, and His grace enabled me to complete it. All honor, glory and praise be to Him.

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DESCRIPTION OF DISSERTATION STRUCTURE

This dissertation, *An Exploratory Study of Parent Involvement in Church Schools in Tonga* presents a journal-ready manuscript to be considered by the dissertation committee as the main component of a hybrid dissertation. This type of dissertation is one of several formats accepted by BYU's David O. McKay School of Education. Rather than a more traditional 5- or 6-chapter dissertation, this hybrid version highlights the journal-ready article with several appendices that support the article in a manner to satisfy the requirements of an institutional review board (IRB).

Appendix A presents an extended literature review of parent involvement including relevant theoretical frameworks. Appendix B provides the methodological approach to gathering and analyzing the data. Appendix C includes IRB approval. This dissertation also contains two reference lists – one for references cited in the journal ready article and the other contains all references cited in the appendices.

The selected journal for this article is the *Asia Pacific Education Review,* which is a peer-reviewed journal that covers all areas of educational research, with a focus on cross-cultural, comparative, and other studies within a broad Asia-Pacific context. It aims to stimulate research, encourage academic exchange, and enhance the professional development of scholars and other researchers who are interested in educational and cultural issues in the Asia Pacific region.

Introduction

Research on parent involvement (PI) and family engagement tends to focus on the significant positive relationship between parent behavior and student outcomes (Jeynes, 2005a, 2010; Mapp et al., 2008). The desire to improve student achievement is a commendable outcome and motivator for improving PI. While addressing PI behaviors is good, the power to influence more effective change in PI may be helped if we understand the factors that help or hinder their involvement choices. The Hoover-Dempsey and Sandler Parent Involvement theory (Hoover-Dempsey & Sandler, 1995; Hoover-Dempsey et al., 2005) is a robust framework that helps answer why parents make the choices they do about the types and frequency of their involvement. This theory explains that parents' personal and observed experiences influence parent involvement choices which are further influenced by life context variables and invitations from teachers and children. Utilizing this framework can help improve the types and frequency of parent involvement.

Very little research in the PI field comes from developing countries which leaves us wondering to what degree the predominant research on PI is relevant, reliable and transferable to a small island nation trying to improve student achievement. Thus, this descriptive, exploratory study seeks to understand the construct of parent involvement from the perspective of parents and teachers in Tonga. Quantitative and qualitative methods were used to gather and analyze data from teachers (n=88) and parents (n=503) at four schools that are owned and operated by The Church of Jesus Christ of Latter-day Saints (the Church) in Tonga. The overarching desire was to understand how they view PI, why parents make the choices they do about the types and frequency of their involvement, and the factors that help or hinder their involvement.

Relevance

Although PI has the potential to positively influence student achievement very little is found in the Tongan Government's Ministry of Education and Training (MOET) publications about the role of parents. There is brief mention of Parents and Teachers Associations (Taufe'ulungaki, 2013) but their primary role is limited to fundraising, physical labor and providing learning resources. The Ministry of Education website lacks acknowledgement, let alone encouragement, of family engagement (Tonga Ministry of Education and Training, 2019).

Research on PI in Tonga is virtually non-existent. Only four studies were found with some relationship to parent involvement. Research in California (Forte, 1994) and New Zealand (MacIntyre, 2008) both note the influence of Tongan culture and language on parent role construction and self-efficacy among Tongan natives in their non-native country. Pengpid and Peltzer (2018) studied PI in adolescent health in Tonga and as a side note identified an education related outcome while Latu (2018) investigated the relationship of family structure with student achievement, but not parent involvement per se.

The current research appears to be the first study to consider PI specifically among Tongan parents in Tongan schools. It will enable schoolteachers and administrators in middle and high schools particularly of the Church in Tonga to compare what they learn about their own schools and PI behaviors with the predominant literature on parent involvement from developed countries. This will help them confidently develop and implement research-based PI policies, practices, and interventions to improve the types and frequency of family engagement in their schools which in turn could significantly impact student achievement. Schools and their governing bodies in neighboring countries may also benefit by understanding how the PI construct is experienced in Tonga and a research approach they may be able to adopt and/or adapt.

Literature Review

Student Achievement and Family Engagement

While the relationship between family engagement and student success has mixed results the findings overwhelmingly indicate that there is a positive relationship between family engagement and student achievement (Lunenburg & Irby, 2002; Mapp et al., 2008; Newchurch, 2017; Sheldon & Epstein, 2004; Spera, 2005; Steinberg & Darling, 2017). Meta-analyses conducted by Jeynes (2005a), Hill and Tyson (2009) and a growing number of studies outside the U.S. confirm significant positive relationships between PI and student achievement. A meta-analysis by Kim (2020) of 15 studies conducted in East Asian Countries showed that the strongest PI relationship was related to academic socialization. In Edo State Nigeria, Fajoju et al. (2016) found that parental involvement significantly influenced pupils' academic achievements in English language, mathematics and integrated science in primary school. Chowa et al. (2013) found that home-based parental involvement in Ghana was positively associated with academic performance, while school-based parental involvement was negatively associated with academic performance.

Defining Parent Involvement and Family Engagement

One of the challenges in this field is defining parent involvement. Referring to early conceptions of PI, Georgiou (1996) cautioned that "it seems that parent involvement has become a generic term with so many meanings that soon it will have no meaning at all" (p. 206). The current research found direction by viewing PI based on what parents do, when and where they do it, and who initiates it. Researchers like Epstein and Sanders (2002) identify what parents do, suggesting the efficacy of specific behaviors such as helping children with homework, attending parent-teacher conferences, volunteering for parent leadership, and attending children's

extracurricular activities. And Spera (2005) talks about the need to "monitor [children's] after-school activities, [and] supervising activities with peers" (p. 130).

Others like Nye et al. (2006) focus more on when an action occurs, explaining that "parent involvement is defined as the active engagement of a parent with their child outside of the school day in an activity which centers on enhancing academic performance" (p. 4). And Epstein's (1984b) early lament that school policies regarding parent involvement sometimes force a choice between at-school and at-home PI, highlights the distinction of where PI occurs which continues to be discussed, for example by Hoglund et al. (2015) and Green et al. (2007).

Additionally, there is an ongoing shift in terminology. Early research focused on 'parent involvement', while emerging emphases include terms such as family, school, community, and engagement (Epstein & Sanders, 2002). Parent involvement views parental contributions that primarily respond to the school's desires and invitations only. The addition of 'engagement' in place of 'involvement' is increasingly popular to suggest a more active and collaborative role of parents. Furthermore, replacing 'parent' with 'family' acknowledges the changing nature of families in which many children live in unique settings where their primary caregivers may include grandparents, older siblings, aunts and uncles, foster care parents and so on.

In the current research, parent involvement is considered a subset of family engagement and includes activities at school, and home, acknowledges the effect of parent attitudes, and implies increasing responsibility for the parent and the school to work together to improve student outcomes (Auerbach, 2009; Chowa et al., 2013; Desimone, 1999; Epstein, 1984a; Grolnick & Slowiaczek, 1994; Hoover-Dempsey & Jones, 1997; Jeynes, 2010; Mapp, 2000). 'Parent involvement' is the term that is used most often in the current research, but instances of family- and parent- engagement also find their way interchangeably into the conversation.

Related Frameworks and Theories of Engagement

Theoretical Landscape

Numerous frameworks and theories relate to or specifically address parent involvement such as the Comprehensive Supports for Student Learning Theory (Adelman & Taylor, 2010), the Parent Development Theory (Mowder, 2005), and Parents as Stage Setters model (Harris & Robinson, 2016). Recently, Jeynes (2018) proposed the Dual Navigation Approach which clarifies and expands the home-based and school-based components of the parent involvement duality. The drive of this model is to help school leaders navigate and support PI in ways that help these aspects work in unison rather than as competing or unbalanced approaches.

One of the most significant contributors to the parent involvement discussion has been Joyce Epstein (see Epstein, 1984a, 1988, 2018; Epstein & Dauber, 1991; Epstein & Jansorn, 2004). Her Model of Parent Involvement proposes six typologies of family-school-community partnerships including parenting, communicating, volunteering, at home learning, decision making and community partnerships (Epstein, 1995).

Parent Involvement Theory

Most theories of parent involvement focus on behaviors or actions of parents and their relationship to student achievement. Less attention is given to how or why parents make decisions about the types and frequency of their involvement. The Theory of Parental Involvement (Hoover-Dempsey & Sandler, 1995) suggests several factors to explain why and how parents make decisions about their involvement in their child's education. While the theory is comprised of five levels which culminate in student achievement it begins with the explanatory constructs for parent involvement (Figure 1) including motivational beliefs, invitations to be involved, and perceived life contexts that lead to forms or types of parent involvement manifest as home- or school-based activities. Others (Anderson, 2005; Green et al.,

2007; Katenkamp, 2008; Lavenda, 2011; Walker et al., 2005) have since extended this earlier

work delving into socio-economic status and cultural factors as additional influencers in the

involvement decisions of parents. Figure 1 is a simplified adaptation of the Hoover-Dempsey and

Sandler (2005) model focusing on the main components that were investigated in this research.

Figure 1

Theory of Parent Involvement
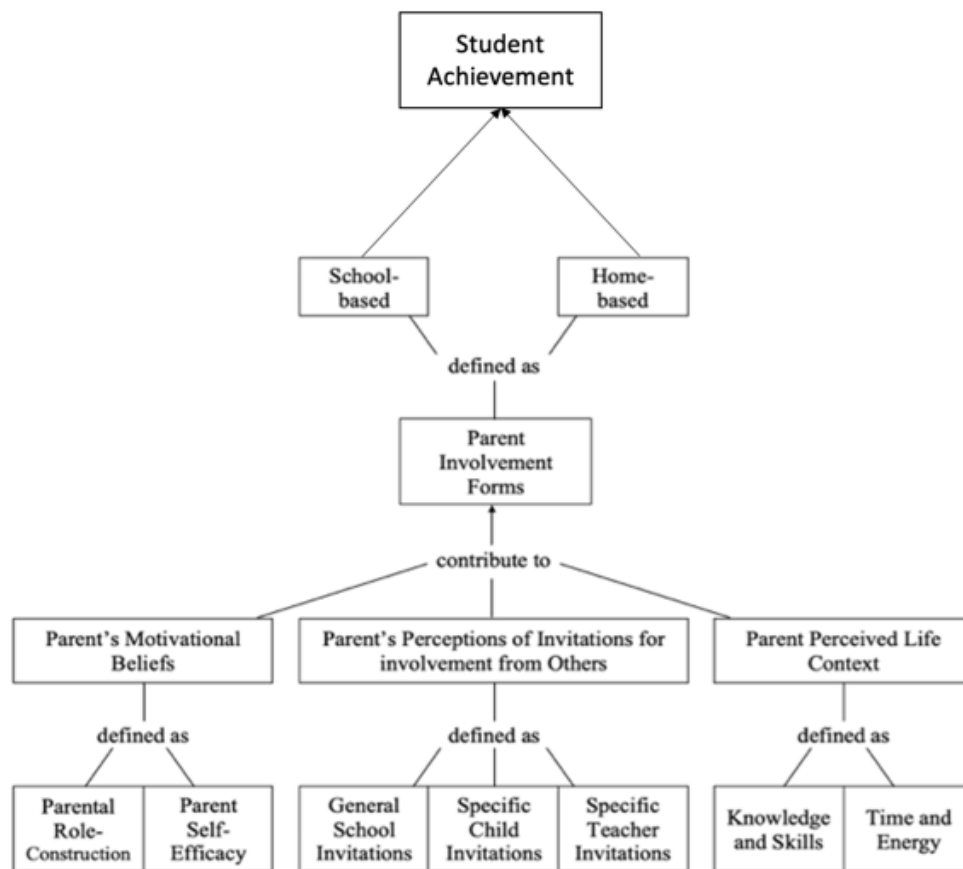
This study proceeds with the Hoover-Dempsey and Sandler (2005) model at its heart. The

following definitions (Figure 2) of the components of the model are based on the work of

numerous researchers (Anderson & Minke, 2007; Biddle, 1986; Green et al., 2007; Grolnick et

al., 1997; Hoover-Dempsey & Jones, 1997; Hoover-Dempsey & Sandler, 1995; Hoover-

Dempsey et al., 2005; Katenkamp, 2008; Lavenda, 2011; Van Voorhis et al., 2013; Walker et al., 2005).

Figure 2

Definitions of the Components of the Hoover-Dempsey and Sander Model

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Student achievement is the academic performance of students as determined by the school at which the student attends.

Parent involvement forms are the things a parent does at home or at the school to support their children's education (e.g., homework help, volunteering, provide resources).

Role construction is a parent's beliefs about what they are supposed to do in relation to their children's education and the patterns of parental behavior that follow those beliefs.

Self-efficacy is a parent's belief and confidence that they have the ability to do what is needed and a sense that their efforts will actually help their child succeed academically.

Invitations for involvement include specific or implied invitations to parents from teachers, staff, administrators, children and others to support their children's education.

Life context variables include parents' skills and knowledge, and time and energy to be involved. Other influences might include socio-economic status, culture, and language.

Barriers and Enablers to Engagement

A secondary line of research in PI considers enablers or barriers to engagement. While many more may be relevant in the broader PI debate only a few that relate to this research are presented and will be revisited in the discussion. Some of these include socio-economic status which can be an indicator of knowledge and skills or time and energy but which should not be equated with a lack of desire to be involved (Mapp, 2000; Sui-Chu & Willms, 1996), family structure (Jeynes, 2005b), school culture including everyday norms, shared beliefs and agreed roles (Weiss et al., 2010), and parental perception of how welcoming the school is (Ferguson, 2008; Hoover-Dempsey et al., 2005). Other influencers are seen in parent-teacher relationships of trust and respect (Emerson et al., 2014; Hoover-Dempsey et al., 2005), parents' educational

background which causes them to not question the teacher (Ramirez, 2003) and to believe the teacher is responsible for formal education of their children (Pena, 2000; Ramirez, 2003), and finally parents' language ability with negative effects observed among minority Spanish speaking Hispanic parents in the US where most teachers speak only English (Ramirez, 2003).

Background: Tonga Education Profile

Formal education in Tonga is compulsory to age 14 and comprised of primary (tuition free), middle and high school levels. While Tonga has enjoyed a long period of formal education and experiences generally high literacy rates there are still numerous aspects left wanting. Public service downsizing in 2008 decreased the number of primary school teachers from 759 in 2004 to 665 in 2008 resulting in a high teacher/pupil ratio. Secondary schooling and higher education struggle to retain qualified and experienced teachers who migrate overseas (Fonua, 2014). The Church of Jesus Christ of Latter-day Saints first opened schools in Tonga in 1892 (Ewer et al., 2015) and currently operates 5 middle and 2 high schools (see columns labelled LDS in Table 1).

Table 1

Tongan School System*

School level	Class level (age)	Total students	All Non-government/ mission school students	LDS students	Total schools	All Non-government/ mission schools	LDS schools
Primary	Class 1-6 (age 6-11)	17,273	2,515 (14.6%)	Not specified	130	19 (14.6%)	0 (0%)
Middle	Form 1-2 (age 11-13)	14,940	10,264 (68.7%)	2800** (18.7%)	54	38 (70.4%)	7 (13%)
High	Form 3-7 (age 12-18)						

* Information comes from Tonga Ministry of Education and Training (2019) and Taufeulungaki (2013)
** 2019 enrolment data obtained from Area Office records

Research Methodology

This study is primarily exploratory and descriptive. Methodologically qualitative in nature (Hunter & Howes, 2019; Patton, 2002), testing specific hypotheses is not the primary intent of this research however as quantitative methods were employed to gather and analyze

data the general null hypotheses that there is no difference in the way participants responded or factors behaved stands in each test and significant differences are discussed. Instead, all data were analyzed from a holistic paradigm. Subsequently a more complete understanding was obtained of parents'/guardians and teachers' perceptions of parent involvement beliefs, behaviors, and motivators in middle and high schools of the Church in Tonga. As PI has received little to no attention and the instruments have never been used in Tonga this is an appropriate approach to take to establish a foundation for future research.

Research Questions

The current study explored how parents and teachers in Tonga define and exhibit parent involvement. It identified the types and frequency of parent involvement behaviors and the factors that influence parents' choices about the forms of their engagement practices. Three questions governed the current research.

1. How do Tongan parents/guardians and teachers perceive parent involvement in Church schools in Tonga?
2. What is the relationship between the motivating factors (motivating beliefs, invitations and life context) of parents in Tonga and the forms of parent involvement?
3. What is the relationship between forms of parent involvement and student achievement in Church schools in Tonga?

Research Framework

In the pragmatist view, researchers focus on the problem and incorporate all available approaches to understand it (Creswell, 2009). The nature of the research questions suggests that employing both qualitative and quantitative methods could elicit the desired information. Thus, to obtain a detailed, comprehensive view of family engagement a pragmatist (Cherryholmes, 1992; Murphy, 1990), mixed methods approach was chosen.

Qualitative focus groups allowed the researcher to learn how parents and teachers defined and experienced PI without imposing terminology or models upon them. This gave an authentic voice to the data and humanized the results. The Tongan perspective was captured, loosely framed within the context of the theoretical framework but allowing participants to use their own language and words to express their understanding and experience of the construct without being limited to the narrow conversation and terminology of the surveys.

A positivist, quantitative approach (Creswell, 2009; Phillips & Burbules, 2000) justified the use of existing surveys which enabled the researcher to stay aligned with the primary theoretical framework and gather data across many factors. Data analysis began with exploratory factor analysis and reliability testing to create explanatory and outcome variables, and to establish confidence in the collected data and instruments used.

Population and Sampling and Data Collection

The target population was the parents/guardians and teachers in three middle schools and one secondary school of The Church of Jesus Christ of Latter-day Saints in Tonga, on the main island, Tongatapu. One of these schools offers boarding for up to 100 students from surrounding islands and other countries. Because of the barrier that distance places on the level of PI for parents of boarding students they are not included in this study. It is recommended that their unique situation be considered in a future study. Teachers at each school and parents/guardians whose children stay in their home each night (i.e., not boarding students) were accessible. The term 'parent' will be used henceforth and includes both related and non-related guardians.

Census

A census approach (Groves et al., 2009; Moore et al., 1989) was employed to invite all teachers and all parents of day students, to take their respective surveys which resulted in

receiving useable surveys from 89 teacher (84% response rate) and 503 parent (38% response rate) surveys.

Teachers gathered during the last week of school in the computer lab at their respective school where a detailed instruction was given to them about the purpose and voluntary nature of the survey. Teachers logged into the Qualtrics survey which took about 25 minutes to complete on average. The data were subsequently exported as an SPSS file to a secure cloud drive. Some teachers were not able to attend and complete the survey due to professional responsibilities.

Parents did not have reasonable access to computers and the internet. School administrators sent a copy of the parent survey home with at least one student per household. Parents instructed to complete just one copy per household and respond to the survey focusing their responses relative to just one of their children. Because of end-of-school logistical challenges the parent survey was not administered until the beginning of the 2020 school year and parents were asked to respond to the survey based on their experience of the previous year. School staff followed up at least two times with parents who did not return their survey within 72 hours, to invite them to complete the survey.

Representative Sample

Focus groups consisted of a representative sample (Groves et al., 2009; Urdan, 2016) to create groups that included participants of different ages, gender, education level, and parental and teaching experience. These were not representative based on percentages of population characteristics but representative with regard to the types of participants that could be found in the population. School administrators helped identify and invite focus group participants that comprised a broad cross section of parent or teacher populations respectively.

Instrument Descriptions

      The instruments for each group were different but related and were originally developed or adapted by Hoover-Dempsey and Sandler (1995, 1997) and then revisited and improved by Hoover-Dempsey and Sandler (2005), Walker et al. (2005) and Green et al. (2007).

Parent Survey

      The parent survey was comprised of seven sections with a total of 66 items. In section A parents responded about their role activity beliefs and their valence toward education. In section B parents considered their self-efficacy for helping children succeed. Section C, D and E asked parents to consider the types and frequency of invitations from the school, their children and the teachers respectively. Section F was divided into two parts to consider how parents perceived their time and energy and knowledge and skills for PI. Section G, looked at the frequency of specific forms of PI, categorized as either home or school activities. Three open ended questions allowed parents to explain how they felt culture, religion and English language affected PI.

Teacher Survey

      The teacher survey was comprised of six sections with a total of 73 items. Section A allowed teachers to reflect on their own sense of efficacy about teaching. Section B and C invited teachers to consider their beliefs about the importance of PI, and parents' efficacy for helping children succeed. In section D teachers reported their beliefs about the importance of certain PI behaviors were, and in section E they reported the percentage of parents that engage in certain PI behaviors. In the final section teachers reported the frequency of their PI invitations to parents. Three open ended questions allowed parents to explain how they felt culture, religion and English language affected parent involvement.

Focus Group

Three parent focus group sessions were conducted with different participants in each one (total n = 18) and four teacher focus group sessions were conducted with different participants in each one (total n = 29). Focus groups were conducted in English with an interpreter present who could translate if needed. The focus group questions were very similar for both parents and teachers and the protocol were aligned closely with Hoover-Dempsey and Sandler's (1997) Parent Involvement Theory. For example, participants were first invited to reflect on their own experience with education at school and at home. This allowed some exploration into events and experiences that may have influenced role construction and self-efficacy. They were then asked how they would explain what parent involvement is to a friend or colleague without receiving a previous definition from the facilitator. This and additional questions allowed participants to identify specific types of PI behavior, consider their relative importance and share examples of seeing these behaviors. They were then invited to identify factors that might enable or inhibit parent involvement and specifically consider the effect of culture, religion and language on PI. This allowed participants to nominate factors that aligned with life context variables as per the model. Audio and video recordings were made during the focus group. Transcription were made as soon as possible after each focus group and uploaded to NVIVO 12PRO. Names of individuals were not used, and places and other identifiable features were changed. Open and axial coding was used to identify themes and relationships in both emic and etic structures.

Translation

In consultation with school principals and counselors it was determined that all teachers had sufficient English capability to understand and complete the teacher survey accurately in English. Parent surveys and consent forms were translated and administered in Tongan and were deemed to be at an appropriate level for parents to be able to complete. The parent survey and

consent documents were translated by an independent native Tongan professional translator. A final translation review was conducted by principals and assigned staff at the Church schools. During parent focus groups an interpreter was present to translate as necessary.

Data Analysis

As an exploratory descriptive study, this research builds a picture of the PI landscape in Tonga from which future research can spring. Findings are grouped together to respond to each research question and organized in a manner to align with Hoover-Dempsey and Sandler's (1997, 2005) Parent Involvement Theory. Although not a primary research focus, the approach taken to align with this model meant that some conclusions could be drawn about the efficacy of employing the model and associated instruments in Tonga. Quantitative data were entered into SPSS which is a statistical software program that enabled the researcher to conduct descriptive analysis of the data as well as factor analysis, reliability tests, t-tests, ANOVAs and regressions (Urdan, 2016; Weinberg & Abramowitz, 2015).

NVIVO 12Pro was used to analyze the qualitative data derived from the focus groups and open-ended survey questions. Open and axial coding (Merriam & Tisdell, 2015) referred to by some as first and second cycle coding (Miles et al., 2014) was done to identify themes that could support, or refute, or expand the findings of the quantitative data. For the purposes of this paper question one is answered through the lens of the qualitative data. Quantitative data are the foundation of analysis for questions two and three with occasional qualitative references.

Reliability and Factor Analysis

The survey instruments were developed and validated in a North American context. As the current research took place in Tonga it was important to determine the reliability of the surveys in this new and unique setting. Reliability tests in the current study supported the use of the Hoover-Dempsey and Sandler instruments in Tonga returning high alpha that were

comparable to the original scores (Hoover-Dempsey & Sandler, 2005; Hoover-Dempsey et al., 2002).

Factor analysis suggested that certain scale items loaded onto additional factors for both the teacher and parent surveys and reliability remained comparable to original alpha scores (Table 2). Factor and reliability analysis of the teacher survey indicated that items in section A loaded on three separate factors, items in section B to E all loaded onto a single factor each but with fewer scale items in each factor, and items in section F loaded onto two factors. In each instance Cronbach's alpha reliability scores remained comparable to the original Hoover-Dempsey et al. (2002) score.

Factor analysis of the parent survey data suggested that certain scale items loaded onto additional factors and reliability remained comparable to original alpha scores (Table 3). Scale items in section B loaded onto two separate factors, items in section A-1 and A-2 loaded on just one factor each but with less items. All other section (C-1 to G-2) remained unchanged with factor analysis indicating that all items in their respective section loaded onto a single factor in each. All reliability scores remained comparable to the original Hoover-Dempsey and Sandler (2005) score.

Table 2

Teacher Survey Factor Analysis and Reliability Scores

Original item*	Factor analysis and alpha scores of current research
Section A: Teacher Self-Efficacy for Teaching (alpha = .81)	Factor 2.1 - External Factors Have Greater Impact (alpha = .84, 3 items – 10, 11, 12)
	Factor 2.2 - Uncertainty and Insecurity About One's Own Ability (alpha = .696, 3 items – 3, 8, 9)
	Factor 2.3 - Confident About One's Own Ability (alpha = .66, 4 items – 1, 2, 4, 7)
Section B: Beliefs About Parent Involvement (alpha = .65)	Factor 3.1 - Beliefs About Parent Involvement - Parents know how to help (alpha = .63, 3 items – 3, 4, 5)
Section C: Parent Efficacy for Helping Children Succeed in School (alpha = .80)	Factor 4.1 - Parent Efficacy - What Parents Do Actually Helps Students (alpha = .797, 3 items – 1,6, 7)
Section D: Importance of Specific Involvement Practices (alpha = .90)	Factor 5.1 - Importance of Specific Involvement Practices (alpha = .87, 7 items – 4-6, 13-16)
Section E: Percentage of Parents' Involvement (alpha = .89)	Factor 6.1 - Percentage of Parents' Involvement (alpha = .98, 12 items – 3 to 14)
Section F: Invitations for Parental Involvement (alpha = .89)	Factor 7.1 - Invitations for Parental Involvement - Making Suggestions to Parents (alpha = .93, 9 items 6, 8-14)
	Factor 7.2 - Invitations for Parental Involvement - Making Contact with Parents (alpha = .84, 4 items 1-3, 16)

* Original factor and alpha reliability as reported by Hoover-Dempsey et al. (2002)

Table 3

Parent Survey Factor Analysis and Reliability Scores

Original item*	Factor analysis and alpha scores of current research
Section A – ROLE CONSTRUCTION Part 1: Role Activity Beliefs (alpha = .80)	Factor A-1 Role activity Beliefs (alpha = .82, items – 1, 2, 4, 5, 7, 8, 9, 10)
Part 2: Valence to School (alpha = .85)	Factor A-2 Valence to School (alpha = .795, items – 1, 2, 3, 5)
Section B: SELF EFFICACY Helping My Child Learn (alpha = .78)	Factor B-1 SE – Lack confidence about my ability (alpha = .88, items – 2. 3. 5. 6)
	Factor B-2 SE – Confident about my ability (alpha = .62, items – 1, 4, 7)
INVITATIONS Section C: Parental Perceptions of General Invitations for Involvement from the School (alpha = .83)	Factor C-1 Parental Perceptions of General Invitations for Involvement from the School (alpha = .79, all 6 items)
Section D: Parental Perceptions of Specific Child Invitations to Involvement (alpha = .81)	Factor D-1 Parental Perceptions of Specific Child Invitations to Involvement (alpha = .85, all 6 items)
Section E: Parental Perceptions of Specific Teacher or School Invitations to Involvement (alpha = .81)	Factor E-1 Parental Perceptions of Specific Teacher or School Invitations to Involvement (alpha = .88, all 6 items)
LIFE CONTEXT Section F-1: Parental Perceptions of Personal Time and Energy for Involvement Activities (alpha = .84)	Factor F-1 Parental Perceptions of Personal Time and Energy for Involvement Activities (alpha = .83, all 6 items)
Section F-2: Parental Perceptions of Personal Knowledge and Skills for Involvement (alpha = .83)	Factor F-2 Parental Perceptions of Personal Knowledge and Skills for Involvement (alpha = .91, All 9 items)
INVOLVEMENT FORMS Section G-1: Parent Choice of home-based Involvement forms (alpha = .85)	Factor G-1 Parent Choice of home-based Involvement forms (alpha = .84, all 5 items)
Section G-2: Parent Choice of school-based Involvement forms (alpha = .82)	Factor G-2 Parent Choice of school-based Involvement forms (alpha = .85, all 5 items)

*Original factor and alpha reliability as reported by Walker et al. (2005)

Findings

Participant Profile

While only two groups were surveyed or interviewed, three groups are represented in the data – teachers, parents/guardians, and students. A total of 89 teachers and 503 parents/guardians completed useable survey. Because so many demographic categories were collected only the most relevant demographic data are included in Table 4 and Table 5. Non-significant demographic data for which another characteristic could represent the same interaction were left out for example, the number and type of household assets, or preferred mode of transportation. Note that 71% of participants are female, more than 96% are Tongan, 73% are aged between 30-49 and 69% have a monthly income less than TOP2499. 69 % of parents have good or excellent English compared with 99% of teachers, and 75% of parents have a high school degree and 5% a university degree compared with 76% of teachers who have a university degree.

Table 4

Parent Education and Employment Frequencies

		Mother		Father	
		Frequency (n=503)	Percent (100%)	Frequency (n=503)	Percent (100%)
Education level	Never attended	5	1.0	5	1.0
	Primary school	12	2.4	23	4.6
	High school	364	72.4	336	66.8
	Trade certificate	66	13.1	75	14.9
	University degree	34	6.8	11	2.2
Occupation	Domestic services (cleaning, housewife)	260	51.7	9	1.8
	Business services (finance, business, manager, retail)	20	4.0	19	3.8
	Public services (health, safety, education)	31	6.2	34	6.8
	Agriculture (farming, gardening)	9	1.8	127	25.2
	Construction (building, trades)	0	0	358	12.1
	Other (weaving, fishing, cooking, other)	102	20.3	61	23.7
Hours work/week	1-20 hours	17	3.4	134	4.0
	21-40 hours	27	5.4	20	5.8
	41+ hours	57	11.3	29	19.1

Table 5

Parent and Teacher Frequencies of Common Demographics

		Parents/Guardians		Teachers	
		Frequency (n=503)	Percent	Frequency (n=89)	Percent (100%)
Age	20-29	15	3.0	10	11.2
	30-39	158	31.4	48	53.9
	40-49	198	39.4	27	30.3
	50+	89	17.7		
Sex	Female	349	69.4	72	80.9
	Male	145	28.8	15	16.9
School level	Primary school	36	7.2	0	0
	High school	319	63.4	55	61.8
	Middle school	142	28.2	33	37.1
Race/ethnicity	Tongan	484	96.2	84	94.4
	Other Pacific islander	4	.8	5	5.6
	White/ Caucasian	3	.6	0	0
Tongan ability	Little ability	9	1.8	1	1.1
	Good ability	36	7.2	14	15.7
	Excellent ability	424	84.3	72	80.9
English ability	No ability	7	1.4	0	0
	Little ability	97	19.3	0	0
	Good ability	234	46.5	38	42.7
	Excellent ability	112	22.3	50	56.2
Family income/ month	Less than TOP 2,499	360	71.6	48	53.9
	TOP 2,500-4,499	53	10.5	21	23.6
	TOP 4,500-6,499	19	3.8	4	4.5
	More than TOP 6,500	22	4.4	15	16.9
Relationship to child	Mother/father	420	83.5		
	Aunt/ uncle	22	4.4		
	Brother/ sister	8	1.6		
	Grandparent	19	3.8		
	Non-related guardian	15	3.0		
Children at home <19 years	1-3 Children	189	37.6		
	4-6 Children	201	40.0		
	7-9 Children	62	12.3		
	10+ Children	12	2.4		
Marital status	Never married	13	2.6		
	Single – divorced	19	3.8		
	Widow/ widower	26	5.2		
	Married	415	82.5		
Distance to school	< 1 km	85	16.9		
	2-5km	107	21.3		
	6-10km	102	20.3		
	> 11 km	156	31.0		
Teaching experience	0-5 years			21	23.6
	6-10 years			28	31.5
	11+ years			38	42.7
Education level	Trade Certificate/ HS			11	12.4
	Bachelor			62	69.7
	Masters			15	16.9

Student Profile

Parents were asked to identify one child that they are responsible for about whom they would answer the survey and give permission for the researcher to access that student's records to determine their end of year scores for certain subjects (Table 6). 83% of 'guardians' are the parent of the child they nominate and 82.5% are married. 67% of the children identified were female, 63% of children identified were in Middle School and 28% in High School.

Table 6

Student Achievement Response Frequencies by Grade Level and Sex

		English			Math			Science			Tongan			Individuals		
		Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Class/ form	Form 1	55	28	83	55	28	83	55	28	83	55	28	83	56	28	84
	Form 2	48	30	78	48	30	78	48	30	78	48	30	78	48	30	78
	Form 3	51	22	73	51	22	73	50	22	72	50	22	72	53	24	77
	Form 4	40	15	55	40	15	55	40	15	55	36	12	48	41	15	56
	Form 5	30	11	41	30	11	41	12	4	16	28	10	38	30	11	41
	Form 6	21	7	28	21	5	26	7	1	8	12	6	18	22	7	29
	Form 7	1	4	5	1	4	5	0	0	0	1	1	2	1	4	5
	Class 6													2	3	5
		246	117	363	246	115	361	212	100	312	230	109	339	253	122	375

Research Question 1: Defining Parent Involvement (Forms of PI)

How do Tongan parents/guardians and teachers perceive parent involvement in Church schools in Tonga? The qualitative data from focus groups as well as open ended survey questions is the primary source used to answer this question. Participants talked about parent involvement in their own words and from their own experiences. They were asked to share how they would explain PI to a friend or colleague, and list examples of PI behaviors they felt were most important or that they had personally done or seen someone else do. They also identified variables that they felt either help or hinder PI. This uncovered how they view PI and established a solid foundation from which to view their responses to question two.

Defining Parent Involvement in Tonga

As focus group participants shared how they would explain parent involvement to a friend or colleague it was obvious that parents and teachers alike felt that PI was important. Several ideas were common between groups. Some parents focused on the relationship with the teacher explaining that they felt that parents should inform the teacher about their child "because that will help [the teacher] cater for what [the student] needs" (PLMS2). One father talked about his young daughter who doesn't hear very well. He explained that they, "tell the teacher [to] just let her sit at the front so she can hear very well when the teacher explains. As parents we have to talk to the teachers, so they know what happens with our kids" (PLMS6).

Others focused on the importance of the relationship between the parent and child explaining the need to have "an open relationship with your child at home. Knowing what your child is learning in the classroom" (PLMS3). Another parent took this further explaining that "[Parents] are the best people that motivate [their child] right at that time…so [parents] motivate you, they even encourage you to have more courage in what you're doing and they also are the people that give you high hopes" (PLMS7). And some even ventured into PI as relationships between several key players saying that, "Parent involvement is working together. Parents plus teacher and the student" (THMS7).

Some reflected on the importance of encouragement even if the parent lacks knowledge or skills, recalling that their own parents would "never be able to answer any questions of my homework... But they say you have to sit down…and do your homework" (TPMS8), and by so commenting also giving a view to their position that helping with homework is PI too.

Others were all encompassing in their comments saying that "[PI is] a full involvement in everything that happened in the school" (TPMS1). This includes Parent Teacher Student Associations (PTSA), academic, social and extra-curricular activities. There were even

suggestions that PI is as fundamental as being a parent who "Knows [their child's] grades. Knows when is school finished. Knows when [to] arrive to school and pick up [children] from school. Knows when school finished" (THMS1).

What Does Parent Involvement Look Like?

Table 7 is a list of statements generated by participants of what they consider are the most important and observed PI. Each statement is a direct quote from a participant and is representative of similar quotes from other participants. No definition of PI was given to participants, they had to generate their own meaning of the term 'parent involvement' and attach behaviors to it based on their own interpretation and experience. Responses naturally grouped together as either home- or school-based activities, and into some general categories.

What Factors Help or Hinder Parent Involvement?

While lists of PI are great, to better comprehend how the PI construct is defined in Tonga we need to take into account how participants perceive variables that help or hinder PI. In the Hoover-Dempsey and Sandler (2005) model these variables are grouped together (Figure 1) as personal motivators, invitations and life context. Following are examples of how participants talked about enabling and hindering factors organized by the Hoover-Dempsey and Sandler model. Statements from participants are included to illustrate how each element of the Hoover-Dempsey and Sandler model might look in Tonga.

Role Construction. Parents seemed to act in ways that reflected lessons learned from their own experiences. One teacher saw her parents' example as helping her be involved. She said, "my parents…really support us in all school activities, even after-hours classes... So, I think I will be more supportive" (TPMS5).

Table 7

Examples of Comments About Important and Observed Behaviors

	Categories	Important behaviors	Observed behaviors
Home-based			
Relationship with the child	Encourage	Provide positive feedback… words of encouragement …support our kid …[don't] label their kids …show that they care by celebrating every success …love and understanding. Just make sure that my children will understand that I love …them no matter what …patience	Caring parents they often go to the power school of the children, Giving him a blessing before his exam last week Be their best friend, I am the best friend of my daughter Their involvement in preparing students uniform to make sure it cleaned and nice, they do support in their homes.
	Example, Expectation and Discipline	Be an example for them. …teach them to fear God, and to know that education is a commandment …discipline their kids before they come to school	I have to sacrifice, I don't have to watch movie, all those things that I like. I have to wake up early
	Nourish	Feed your children...Not only mentally but physically Make sure they eat breakfast, lunch	Making breakfast for them every morning. … taking lunch to the students
	Communicate with child	…listen to my child first how they are doing …every day just ask them. children how was your day, what can we do? Give them time. Give them quality time.	I try to find what his strongest way you know, what are some of the things he like to do. They follow up with their students.
Help the child learn	Read	…read and listen to them. Help them with phonics. Help their children to read, teach them to read. …come to our library to get books.	I'm doing reading with my students,
	Schedule	Give their child time enough to study every day. …give them time to watch TV especially the news to explore Give them time to rest in their home you know, their brain needs to rest to explore their minds. …make a schedule for their kids.	
	Homework help	…sit down and go through the homework with them …help with the kid's English …ask is did you do your homework… If they say yes or no, still check	I've seen some of my parents go for extra tutors for the kids
School-based			
Relationship with the teacher	Communicate with teachers	Provide feedback what we need to do as teachers to help the children I would prefer a direct face to face …have a relationship with their teachers …conversation with a parent at least once a month Communication is the key Phone call or if they don't got a phone at least write a letter	They'll just approach me … in town supermarket I often receive phone calls from parents A father came in and asked questions about the exam They email and they just talk. Came across my classroom … and asked me about the performance of their students … sat with me… discussing what their child is learning
Help the child learn	Check Grades	…increase their time on PowerSchool when they are on the internet …check their grades pretty much every week and follow up with the teachers	…emails from parents constantly checking... grades Parents come by after school and ask for their students' assessment on PowerSchool. …both parents came in to pick up their child report card
	Help in Class	Just come show, show face when it comes to our PTA personal report card. So at least …come once a term to see how the student was that term. And don't send the neighbor …come and sit together with the child during class. …help with the teacher	…Involvement… in my class…during [and after] school hours I saw a mother peeping in my door Just be there in the classroom Helping the project like…carving or reading math A parent actually came and sat inside the classroom... … parents … asked to help check the table of multiplication.
	Provide Resources	…provide school materials for the kids when they come here…pens, paper, notebook and all those things.	I like to buy things for me so right now I have to save money for their school and everything that they need.
	Extracurricular	…support my daughter in school, in her talent, like sport.	They come and give extra help outside of school hours … support their kids through extra-curricular activities
	Support from the community		The people of the community help a lot

Invitations. Parents at times are reluctant or unsure how to be involved and invitations can be instructive and encouraging to invoke PI. Participants shared examples of invitations.

General Invitations. General invitations relate to the culture and warmth of the school environment as reflected by a teacher who said, "I think the school environment does play a big part in parent involvement. Especially…programs that are going on, running in school like talent, like culture day, programs that we involve parents to attend you know" (TPMS6). Another teacher saw the school environment as a potential barrier and explained that parents that, "are not educated will feel awkward. Coming in and talk to teachers...Just because they'll feel inferior" (TLHS2).

Child Invitations. Invitations from children were not directly raised by participants, but one parent inferred that she received invitations from her child in the phrase that, "when she comes to me [with a] problem" (TLMS2).

Teacher Invitations. Invitations from teachers can strengthen parent's beliefs that they can and should be involved. Such invitations may include direct suggestions for involvement. One teacher suggested that, "We can do trainings, like compose trainings for the parents and talk to them [about] what we expect them and their responsibly" (THMS7). While some parents felt their school was condescending in their approach others were grateful for teachers who "give us idea [about] how we can help our kids at home and in school" (PPMS4).

Time and Energy. Demands on parents' time including family, work or community involvement impact parent involvement. A working mother said, "I have a child who's in middle school, I've never done any of these things that I'm suggesting. It's just because I don't have time" (TLHS6).

Knowledge and Skills. When parents have the knowledge and skills to help their involvement tends to increase. A parent explained that there are, "A lot of parents I'm sure that

wanted to help but [aren't involved] because they do not maybe have enough knowledge or ideas how to help their child" (PLMS2).

Language Ability. There were mixed feelings about whether or not language was a barrier to PI. Responses about English language as a barrier to parent involvement ranged from statements like, "…there is no challenge" (PLHSS491), to "It's truly important that you are able to read and write in English so that you can help your children" (PLHSS399). Language is far more complex than these comments may suggest and warrants further investigation which is beyond the scope of this research which acknowledges language as a potential factor in the degree of PI observed. The majority of teachers all speak Tongan as their first language and communicate with parents in Tongan. The data presented in this study are based on participants perceptions of their own ability in Tongan and English. These perceptions likely do not reflect accurate language capability and literacy. Participants may be judging their ability on social skills or Basic Interpersonal Communication Skills (BICS) rather than academic ability or Cognitive Academic Language Proficiency (CALP) which would be better tested using more robust instruments (Cummins, 2008).

It should be noted too that this discussion about English language should not be considered to imply that goo PI requires good English ability by the parent. Many PI behaviors can be conducted successfully in Tongan. Enquiring about the child's day, encouraging the completion of homework, reading in Tongan and so forth, are just a few examples of traditional PI behaviors that don't require the parent to have high level English ability. There are also other behaviors more focused on parent-child relationship like communication, expectation, providing nourishment.

Family Structure. Participants tended to believe that PI was negatively influenced by broken or disrupted homes explaining that, "some of the students are not staying with the parents.

They are adopted or with the [relatives] or they passed away. So, we had for them to come they just met them at the report cards which was hard to follow up with those kids" (TPMS5).

Socio-Economic Status. One participant explained that they're "pretty sure most of the parents, if not all, want best for their kids. But maybe too shamed because they're unable to afford whatever is needed to support what the children need" (PLHS2).

Culture of Respect. A lot was said about the Tongan culture. There were two ways that participants reflected on culture. First, they explained that culture of respect is good to help students be respectful and learn from the teacher. One parent explained that, "The culture will help of teaching their children to be respect, to be honor, to be honest and when they came to school, they have to obey the rules" (PLHS5). But participants responding in this way tended to lose the focus of the question which was to understand the effect of culture on PI not student behavior. Table 8 shows the frequency of comments about culture by predominant themes. These themes were included initially when at least five related comments were identified. Notice that 37 comments talk about respect for authority helping student achievement. Each of these refers to the importance of students having respect for the teacher and how that helps in the classroom.

Second, others viewed culture as having a negative effect on PI, suggesting that the culture of respect had a stifling effect on parents engaging with teachers out of respect for their authority, experience or credentials. Although there are fewer comments related to respect an PI compare to respect and student achievement 16 comments talk about the hindering effect of respect on PI compare to just seven that it helps.

Table 8

Frequency of Comments on Culture

	Parent Involvement					Student Education				
Cultural Influence	Help	% of PI help	Hinder	% of PI hinder	Total Culture and PI	Help	% of SE help	Hinder	% of SE hinder	Total Culture and SE
Community Support	1	100%	0	0%	1	32	94%	2	6%	34
Unspecified	12	71%	5	29%	17	19	73%	7	27%	26
Kava Drinking	0	0%	3	100%	3	1	33%	2	67%	3
Learning and Change	2	100%	0	0%	2	13	100%	0	0%	13
Love and Relationships	11	100%	0	0%	11	7	78%	2	22%	9
Respect for Authority	7	30%	16	70%	23	37	86%	6	14%	43
Responsibilities	0	0%	65	100%	65	0	0%	13	100%	13
Total	33	27%	89	73%	122	109	77%	32	23%	141

Several participants referred to there being "a culture of silence in our people. Sometimes they cannot speak out, they cannot…" (TMS7). Another participant captured this sentiment and explained in more detail that

> Part of our culture is to obey without questions, especially at home. So, if your parents tell you to do something as children you have to do it right away without questions, even though you can't see the consequences of that thing. So, I believe they bring that here to school. Some parents even though there are something they need to follow up and questions to teachers…they still have that strong feeling of our tradition, our culture is to respect them, and not sharing and express their opinions or something. (TPMS4)

Culture of Duty. Another important element of culture is that of duty. As shown in Table 8 65 comments (100%) that talked about duty and PI considered duty to hinder PI. Duties referred to the responsibility that participants felt to participate in weddings, funerals, village meetings and the like. This same element of duty was also considered to hinder student

achievement, most often because participants would have their children attend to cultural duties at times rather than attend school. This sentiment is reflected by a teacher who said that,

> Tongan culture involves a lot of functions to attend to and which hinders the involvement of parents in something more important which is their child education. Some of the culture [requires you] to be there on that occasion and we prioritize those functions more than our kids' education. (TLHS357)

In summary, participants defined parent involvement in several ways that aligned with a home-based or school-based view within two categories of relationships and support learning. From the home-based perspective they identified two main factors.

1. ***Relationship with the child*** which includes being loving, encouraging, and supportive It also includes communication, celebration of achievement, physical nourishment, discipline, example, and expectation.

2. ***Helping the child learn*** which includes reading with them, providing a schedule, helping with homework, and checking grades.

School-based PI was also comprised of two main factors.

1. ***Relationship with the teacher*** which included communication, discussion about child needs and offering feedback about teacher performance.

2. ***Helping the child learn*** which includes helping in class, providing resources that support in class learning and supporting extracurricular opportunities during or outside of school hours.

Research Question 2: Relationships Within the Model

While question one defines what PI looks like in Tonga, question two looks at the relationship between the factors themselves as defined by the Hoover-Dempsey and Sandler (1995, 2005) model. What is the relationship between the motivating factors (motivating beliefs,

invitations and life context) of parents in Tonga and the forms of parent involvement? To be

clear, this question is intended to look at three relationships each with forms of PI as the

dependent variable.

1. What is the relationship between personal motivators and forms of involvement?

2. What is the relationship between invitations and forms of involvement?

3. What is the relationship between life context and forms of involvement?

At its simplest level the interactions between the components can be viewed as shown in

Figure 3. Arrows suggest directionality of the interactions moving from independent/explanatory

variables to the dependent variables.

Figure 3

Hoover-Dempsey and Sandler Theory of Parent Involvement Interactions
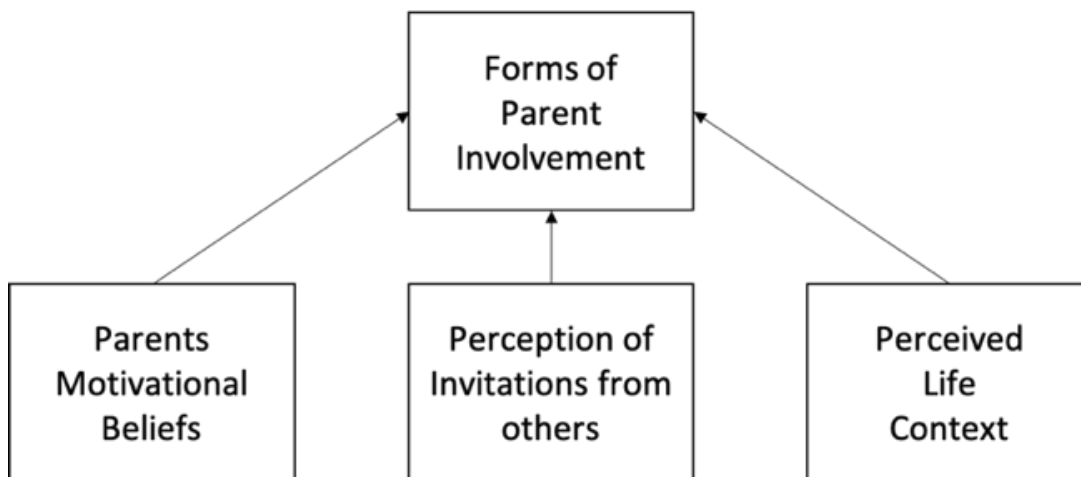
Each of the personal motivators (Figure 3) are further defined by additional constructs

which, when used in place of their parent construct offer a more complex view of the interactions

between the components of the foundational model of this research (Figure 4). The parent data

contribute directly to a review of these relationships. Teacher data are also included in the

section presenting findings about teacher invitations. After presenting each relationship

separately, the results of a multiple regression analysis are presented.

Figure 4

Hoover-Dempsey and Sandler Model - Complex Interactions
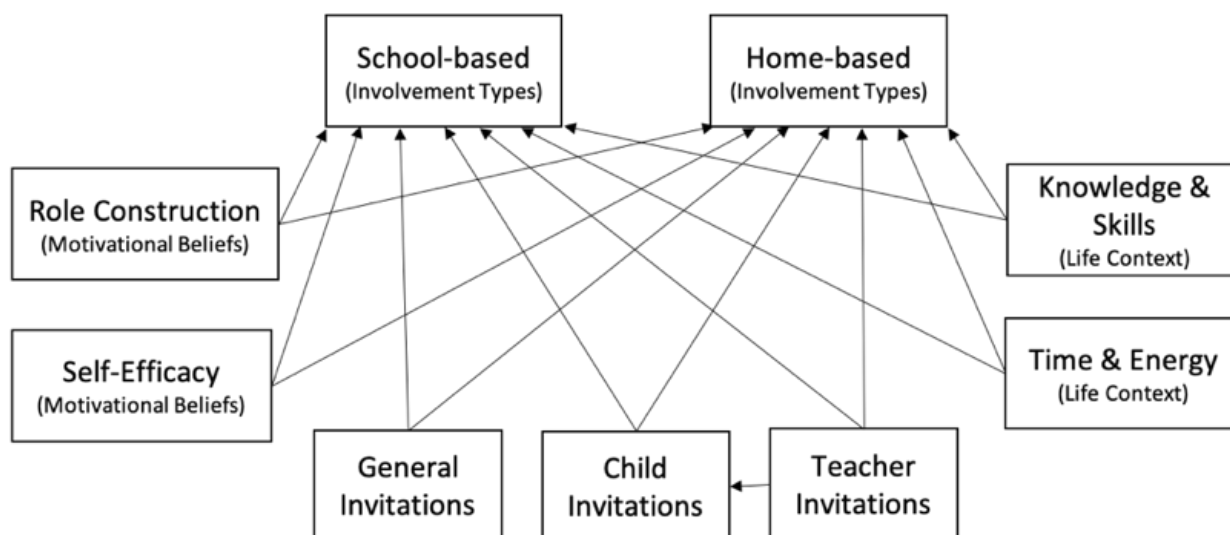
Motivational Beliefs and Type/Frequency of Parent Involvement

Role Construction. Simple regression shows that parents' belief that they should be involved accounts for only 2.1% (p = .003) and 4.6% (p = .000) of the variance in the frequency of home-based and school-based activities respectively. Parents recalled experiences of struggling parents but who always, "gave me that support" (TLMS6). Another parent reported that she brought her children to a Church school where they are not punished in the same way she had been as a child. Others recalled the actions of their own parents who did not allow TV during the week or encouraged them to invite friends for supervised study groups, or who took them to the library. Similar examples of PI were suggested by participants as being important or observed which could be an indicator that their personal experiences have helped shape their role construction. Future research would do well to look for relationships between these experiences and the frequency and efficacy current beliefs and practices.

Self-Efficacy. Simple regression shows that parent's sense of self-efficacy that their efforts actually help accounts for 10.2% (p = .000) and 4.4% (p = .000) of the variance in the

frequency of home-based and school-based activities respectively. Focus group responses that hinted at a relationship with parents' self-efficacy were most often linked to parents' knowledge and skills. For example, one parent who didn't feel they knew enough chose not to help for fear of teaching their child the wrong thing and a teacher who asked parents to be involved and help their children with homework recalled that "the common response is that the parent feels…inadequate intellectually to assist and fears hindering or looking less respectable in the eyes of their child" (TLHS83).

Life Context and Type/Frequency of Parent Involvement

Life context variables also have a strong positive relationship with forms of parent involvement. The variables included in the parent survey addresses time and energy and knowledge and skills.

Knowledge and Skills. Parents' knowledge of subject matter and the value of PI, as well as the skills to impart that knowledge and help their child with specific content related work and learning in general, can influence the degree to which parents are involved. Simple regression shows that parent's belief about their knowledge and skills accounts for 13.8% (p = .000) of the variance of the frequency of home-based involvement and 11.4% (p = .000) of the variance of the frequency of school-based involvement. "A lot of parents I'm sure that wanted to help but [aren't involved] because they do not maybe have enough knowledge or ideas how to help their child" (PLMS2).

Time and Energy. Simple regression shows that parent/guardian's belief about their time and energy explains 8.4% (p = .000) of the variance of the frequency of home-based involvement and 11.4% (p = .000) of the variance of school-based involvement. A mother explained that, "…I have been taking classes myself to continue on my studies. So, at home I hardly look at the kids' education" (PLMS3). A teacher attributed lack of involvement to parents' organization skills,

suggesting that "Parents need a schedule. That's what stops them because maybe they don't balance out the time for them to bring their kids or they forgot to take them to a Math class in the evening" (THMS7).

Invitations and Type/Frequency of Parent Involvement

Invitations from teachers for parent involvement appear to play an important role in the frequency of parent involvement. General invitations from the school influence less variance in forms of parent involvement compared with specific invitations from teacher and child. Based on parent data simple regression models show that general invitations, specific child invitations and specific teacher invitations explain 4.8% (p = .000), 18.2% (p = .000), and 10.5% (p = .000) of the variance respectively in the frequency of Home-based involvement. While general invitations, specific child invitations and specific teacher invitations explain 3.3% (p = .000), 15.8% (p = .000), and 17.1% (p = .000) of the variance respectively in the frequency of School-based involvement. One striking relationship is that between teacher and child invitations themselves. Specific teacher invitations account for 40.5% (p = .000) in the variance of specific child invitations suggesting that if teachers invite more students invite more.

General Invitations. General invitations may be either specific or implied the are influenced by the feeling and culture of the school. One parent noted that "…when the workers here are not approachable parents will not come and talk to you…when they are polite and respectfully welcome parents, I'm sure they will feel the spirit and they will come" (PLMS2).

Child Invitations. While these reports were found in the survey data, very little was said about child invitations in the focus groups. Most of the comments about invitations were about teachers telling parents what they should do or providing training.

Teacher Invitations. In focus groups teachers didn't give examples of specific invitations they would extend, instead they talked about training parents and helping them

understand their responsibility. Talking about parents one teacher remarked that, "We're not saying they don't know what to do but at least we provide something for them to know and see what they can do to involve in their children's education" (TLMS7). At another school the faculty felt they weren't receiving feedback from parents "because of our culture" so they specifically invited feedback by explaining to parents that "feedback is very essential for our improvement as a teacher, as a principal, as a school. And you know what happened? They gave us their feedback…" (TPMS6).

Based on the teacher survey data we gain the following insights. In the teacher survey distinction is not made between home and school-based involvement. Simple regression explains that the frequency of teachers making contact with parents, accounts for 11% (p = 0.002) of the variance in the percentage of parents that are involved. And, teachers making specific suggestions for PI accounts for 26% (p = 0.000) of the variance in the percentage of parents that are involved. It's also important to note that teacher beliefs about the efficacy of parents' behavior accounts for 11.4% (p = 0.002) of the variance in teachers making specific suggestions for PI and the frequency of teachers making contact with parents accounts for 43.8% (p = 0.000) of the variance in making specific suggestions.

All Components and Type/Frequency of Parent Involvement

Finally, multiple regression analysis was conducted using the parent data, entering all the relationship variables from the Hoover-Dempsey and Sandler (2005) model as explanatory factors and controlling for selected demographic characteristics including participant age, gender, number of children, household income, English language ability, and parent's education level (see Table 9). Several non-significant categories are not included in the table. The home-based model (R^2 = .333, $F_{(28, 346)}$ = 6.18) and the school-based model (R^2 = .325, $F_{(28, 346)}$ = 5.96) were both significant (p < .01) as shown in Table 9. Home based PI is significantly influenced by

Parent self-efficacy (B = .167, SE = .054), invitations from the child (B = .288, SE = .055), and having the knowledge and skills to help (B = .117, SE = .056). School-based involvement is also influenced by invitations from the child (B = .178, SE = .060), and having the knowledge and skills to help (B = .146, SE = .061), with the addition of parent's belief that they should be involved (B = .195, SE = .058), and specific invitations from teachers (B = .249, SE = .058). There is also some influence based on father's education level and parents' English capability. When Fathers have a high school (B = 1.064, SE = .463), trade certificate (B = 1.027, SE = .479), or university (B = 1.060, SE = .533) education more home-based involvement is reported. Home-based involvement increases when English ability is little (B = .647, SE = .315), good (B = .807, SE = .310), or excellent (B = .686, SE = .314). Mother's education level was also tested but no significant relationship with student achievement was identified. And school-based involvement also increases when English ability is little (B = 1.037, SE = .346), good (B = 1.089, SE = .341), or excellent (B = 1.097, SE = .345).

Research Question 3: PI and Student Achievement

What is the relationship between parent involvement and student achievement in Church schools in Tonga? The average end of year scores for all schools across all school levels are found in Table 10. The Church schools are all English language schools, meaning that all subjects are taught in English except for Tongan language. Thus, in addition to grappling with terminology and theories and so on in math and science for example, students have to interpret those in their nonnative language.

The key data points for this research question derive from the parent/guardian surveys where parents self-reported the frequency of their involvement in traditional home-based (e.g., talking with the child; supervising homework; help child study for tests; practice spelling, math

or other skills; reads with the child) or school-based (e.g., help at the school; attend events at school, volunteers for field trips; attend PTA meetings; attends school's open house) activities.

Table 9

Multiple Regression Coefficients for Type of Parent Involvement

Independent variables	Home-based B (Standard Error)	School-based B (Standard Error)
(Constant)	-.987 (.518)	**-1.584**** (.569)
Relationship variables		
A-1 - Role construction: parent believe they should be involved	-.024 (.053)	**.195**** (.058)
B-2 - Self efficacy: Parents believe their efforts help	**.167**** (.054)	-.050 (.059)
C-1 - General invitations for Involvement from the School	.076 (.050)	.002 (.054)
D-1 - Specific Invitations for Involvement from the Child	**.288**** (.055)	**.178**** (.060)
E-1 - Specific invitations for Involvement from the Teacher	.035 (.053)	**.249**** (.058)
F-1 - Life context: parents have the time and energy	.019 (.057)	.083 (.062)
F-2 - Life context: parents have the knowledge and skills	**.117*** (.056)	**.146*** (.061)
Demographic variables		
Male	-.090 (.090)	-.137 (.099)
Father education: Primary school	.938 (.499)	.422 (.548)
Father education: High school	**1.064*** (.463)	.164 (.509)
Father education: Trade certificate	**1.027*** (.479)	.464 (.526)
Father education: University degree	**1.060*** (.533)	.422 (.585)
Family monthly income: TOP 2,500-4,499	.146 (.124)	-.054 (.136)
Family monthly income: TOP 4,500-6,499	**-.432*** (.205)	-.428 (.225)
Family monthly income: > TOP 6,500	-.165 (.192)	.142 (.211)
English ability: a little	**.647*** (.315)	**1.037**** (.346)
English ability: good	**.807**** (.310)	**1.089**** (.341)
English ability: excellent	**.686*** (.314)	**1.097**** (.345)
Model Summary		
R^2	.333	.325
$R^2_{adjusted}$	.279	.271
$F_{(28, 346)}$	**6.181****	**5.963****

** $p < 0.01$, * $p < 0.05$

Table 10

End of Year Subject Score - All School Levels and All Schools

	End of year score	Minimum score	Maximum score
English (n = 429)	79.47%	26%	99%
Math (n = 427)	78.45%	8%	100%
Science (n = 376)	77.7%	37%	100%
Tongan (n = 404)	86.4%	41%	99%
Combined	80.25%	28%	99%

Spearman's Rho correlation was used rather than Pearson's correlation to test the relationship of PI types on the ordinal scale of student achievement (Urdan, 2016). Spearman's Rho found that only two home-based and no school-based behaviors had significant relationships with student achievement (Table 11). Helping children study for tests was significantly related to Science achievement (corr. = .138, p = .011) as well as the combined subject score which is likely the influence of the relationship with science scores. Reading was significantly related to English achievement (corr. = .106, p = .037). Of course, there may be other factors at play in the relationship between reading and English scores. These families may have better English ability, or a tradition of literacy afforded them based on parents own education level or socio-economic status (SES). And so, reading may not be the only factor influencing the English scores.

Individual behaviors were combined into new variables representing home- and a school-based factors. Simple regression models were run with home- and school-based factors as the independent variables and the student achievement scores for each subject as the independent variable but none of these models returned significant results. Based on regressions no individual behaviors or composite factors are reliable predictors of student achievement.

Table 11

Spearman's Rho Correlation of Home-Based PI and Student Achievement

Home-based

Someone in this family:		English	Math	Science	Tongan	Combined
- talks with this child about the school day.	Corr. Coefficient	.096	.021	.090	.081	.077
	Sig. (2-tailed)	.058	.673	.097	.119	.129
- supervises this child's homework.	Corr. Coefficient	.073	.049	.089	.055	.068
	Sig. (2-tailed)	.150	.337	.099	.295	.182
- helps this child study for tests.	Corr. Coefficient	.091	.082	**.138***	.058	**.105***
	Sig. (2-tailed)	.071	.105	.011	.268	.037
- practices spelling, math, or other skills with this child.	Corr. Coefficient	.027	.034	.064	.062	.038
	Sig. (2-tailed)	.595	.506	.237	.236	.452
- reads with this child	Corr. Coefficient	**.106***	.057	.058	.041	.082
	Sig. (2-tailed)	.037	.264	.286	.437	.106

School-based

Someone in this family:		English	Math	Science	Tongan	Combined
- helps out at this child's school.	Corr. Coefficient	-.038	-.012	.009	.019	-.013
	Sig. (2-tailed)	.457	.820	.872	.720	.808
- attends special events at school.	Corr. Coefficient	.032	.057	.084	.052	.040
	Sig. (2-tailed)	.526	.262	.126	.324	.434
- volunteers to go on class field trips.	Corr. Coefficient	-.047	-.031	-.029	-.053	-.051
	Sig. (2-tailed)	.363	.546	.597	.319	.326
- attends PTA meetings	Corr. Coefficient	.049	.011	.098	.040	.035
	Sig. (2-tailed)	.338	.830	.071	.441	.491
- goes to the school's open house	Corr. Coefficient	.014	-.003	.052	-.007	.001
	Sig. (2-tailed)	.791	.950	.347	.892	.979

* Correlation is significant at the .05 level (2-tailed)

Additional investigation of the frequency distribution of parent responses to PI behavior showed that the majority of responses were highly positive and perhaps too optimistic. This could have resulted in a reporting error due to participants' desire to provide socially desirable responses, or from misunderstanding the question or the behaviors as stated in the survey.

Multiple-regression models were run for each subject with the initial explanatory variable being either home-based or school-based behaviors and end of year grades for each subject as the dependent factor. Multiple predictor variables were included in each model to control for parent/guardian age, sex, race, relationship to child, number of children at home, occupations, education, levels, socio-economic status based on income and assets, and language ability with

English and Tongan. Again, in each model home- or school-based behaviors did not present as significant predictors of student achievement. For every subject and model that was run, middle school, fathers' occupation, and father's level of education were significant predictors of student achievement in the majority of models. Parent's age, number of children at home, distance to school and income were other also predictors in several instances. Parents' English language ability was a predictor for English Language achievement but not for any other subject.

While little was talked about by participants that directly linked specific PI behaviors with student achievement in several instances the relationship between parents, student and teachers were cited as an important factor in student success. One teacher noted that, "If they [students] own it then they can be successful and if the parents know that they have responsibility as well and a teacher fulfills his or her responsibility that child will own their education, their own learning and without a doubt they will succeed, they will go very far" (TLMS8).

Discussion, Implications, and Recommendations

A teacher's reflection about PI and the value of local research is instructive and offers support for relevant research in Tonga. After acknowledging the good intent of parents and the love they have for their children she said:

> The only thing that would make the difference to me is that in overseas countries that are more developed they [are] exposed to research so maybe they have more strategies and ways of how they [can] help parents to become involved. (TLMS2)

> Hopefully this research is a step in that direction - to provide the Tongan people with

research of their own and make the difference. This research provides a more complete understanding of parents' and teachers' perceptions of family engagement beliefs, behaviors, and motivators in middle and high schools of the Church in Tonga.

Some findings were similar to those found in research in developed countries including the way Tongan parents and teachers defined what parent involvement is generally and the types and frequency of observable behaviors. However, a strong culture of respect was considered to potentially inhibit parent involvement, while invitations for involvement appear to play a significant positive role in increasing parent involvement. Understanding unique attributes of parent involvement in Tonga will help teachers and administrators plan and implement more effective strategies to improve the types and frequency of family engagement in their schools.

Conducting the study only in the Church schools means the data obtained is relevant primarily to the unique setting that exists there. It is possible that the data obtained was strongly influenced by the Church culture to which parents and teachers belong. This may restrict the generalizability and transferability of the results, keeping them within the realm of the Church schools that participated in the study. However, the mixed methods approach and the instruments and protocols used may provide a model for similar or extended research in similar settings.

Forms of Parent Involvement

Parent Involvement is often categorized as either School-based or Home-based with the view that "in order to maximize the contributions that parents can make to their children's educational outcomes the salience of both these sets of components should be more fully appreciated and utilized" (Jeynes, 2018, p. 148). The focus groups were particularly helpful in generating examples of home- or school-based PI.

Table 12 is comparison of the behaviors identified in the current research with three prevailing frameworks. The figure begins by listing Epstein's (1995) six typologies reveals and interesting alignment with those categories of involvement generated by Tongan parents and teachers. Jeynes (2018) suggests that models like that proposed by Epstein do not give enough weight of interest or credit to home-based elements or parent involvement. Based on six

metanalyses he has conducted over the last 15 years he proposes five home-based and five

school-based components that school leaders should emphasize which he terms the Dual

Navigation Approach.

Table 12

Other Models and Participants' Types of Parent Involvement

	Focus Group	Hoover-Dempsey and Sandler (2005) survey questions	Epstein (1995) Six Typologies	Jeyne's (2018) Dual Navigation Approach
Home-based				
Relationship with the child	Communicate with child **Encourage Example, Expectation, Discipline Nourish**	Talk with child about school day	Parenting	Supportive & informative communication with child Supportive parental style Expectations Household rules
Help the child learn	Read Homework help **Schedule**	Read with child Supervises homework Helps child study for tests. Practice math, spelling, other	Learning at home	Read with child Check homework
School-based				
Relationship with the teacher	Communicate with teachers	Attend school open house	Communicating	Communication with teacher/ school Partnership with teacher
Help the child learn	Help in Class Check Grades Extracurricular Provide resources **Support from the community**	Helps at school Volunteers for field trips. Attend special events Attend PTA meetings	Volunteering **Decision making** Collaborating with community	Attend/ participate in class Drawing from community resources

Interestingly Tongan teachers and parents talked about PI in a very similar way to that

described by Jeynes (2018) such that nine of the ten components he proposed are found in the

findings of the current research, the exception being his category of drawing on community

resources, also shown in Table 12. The parent behaviors studied using the Hoover-Dempsey and

Sandler (2005) survey are also shown. Several of the behaviors considered important or observed

by the focus group participants in this research are not found in the survey are shown in bold

type.

Numerous behaviors considered important in Tonga align with those in developed countries. The discrepancy between these models and the findings of this research is the absence of discussion in Tonga about PI that aligns with decision making. This may be related to the culture of respect and the consideration that it's the role of teachers to take care of education, so parents don't venture into, nor do schools offer decisions making opportunities for parents. Any relationship of this nature needs further research. The additional emphasis identified in this research on relationships with the child also seem to highlight what is perhaps a cultural emphasis on family, example, discipline and nourishment over traditional PI behaviors examined in the survey used in this research. This relationship nuance seems to be supported at least in part by the work of Jeynes (2018).

Relationships Within the Hoover-Dempsey and Sandler Model

Each of the motivating variables in the Hoover-Dempsey and Sandler (2005) model exhibited varying significant relationships with both home- and school-based PI. From the Parent data, simple regression showed that each relationship generally accounted for less than 10% of the variance in either home- or school-based PI. Self-efficacy, knowledge and skills and child invitations each showed stronger relationship to home-based PI than the other variable and knowledge and skills and child invitations and teacher invitation each showed stronger relationship to school-based PI.

Child and teacher invitations were particularly influential in the variance of PI. This same pattern was reflected in multiple regression analyses (Table 9) with home- and school-based behaviors as the dependence and the other personal motivator variables as the explanatory variables and controlling for numerous demographic categories. Although simple regression suggested many positive significant relationships, when all other factors were controlled for in the multiple regression analyses role construction, self-efficacy, knowledge and skills, child

invitations, and teacher invitations each played a significant role in either Home- or school-based PI or both. Controlling for all other variables family structure and socio-economic variables did not appear to significantly influence PI but English language ability was significantly positively associated with both home- and school-based PI. From the perspective of the school (or policy makers), it seems they could likely increase parent involvement by:

1. Educating parents that they should be involved and that their involvement makes a difference. Participants reported that schools have begun providing training, but they have primarily included just ideas and subject-based content. There is an opportunity to help parents understand why and how the involvement makes a difference to their child.

2. Providing more invitations for parent involvement, with specific suggestions. This may require training for teachers, so they extend meaningful, sincere invitations that include suggestions for valuable PI.

3. Helping parents gain skills and knowledge in subject content and on how to be involved. As mentioned, school have begun doing this and are thus encouraged to continue.

4. Helping parents develop some degree of English language ability. Helping parents improve the English capability will allow parents to engage with students in the language of the education the students are receiving. This will help parents feel more confident and enable them to comprehend the work, especially for the child's English language class.

Role Construction, Self-Efficacy, Knowledge, and Skills

Parental role construction is the belief that parents have about their involvement, that belief is influenced by parents' beliefs about rearing children, education, child development and

what parent behaviors may influence a child's success at school. These beliefs may stem from a parent's own childhood home and school experiences as well as others' expectations (Hoover-Dempsey et al., 2005).

Parent self-efficacy is the sense that parents have of their ability to be involved in ways that will have a positive effect on student achievement. It influences what parents do and their persistence to continue to be involved (Hoover-Dempsey et al., 2005). As a socially constructed phenomena Hoover-Dempsey and Sandler (2005) explain that "schools important others (family members, social groups) exert significant influence on parents' sense of efficacy for helping their children succeed in school' (p. 109). This sense of efficacy can be influenced by parents' knowledge and skills. The more confident parents are in their ability to help the more likely they are to engage (Hoover-Dempsey et al., 2005). Both parents and teachers reference efforts of the schools to provide training that helps parents understand their role and learn ways to be involved. These efforts should continue but may be more targeted and include other aspects for example help parents improve English language capability.

Language

Language can stifle the ability for effective communication between parent and teacher and can inhibit effective participation in school councils and the like as observed among minority Spanish speaking Hispanic parents in the U,S. where most teachers speak only English (Ramirez, 2003). In the Church schools in Tonga this communication barrier between teachers and parents does not seem as prevalent, however because the schoolwork is in English, parents may not feel they have the knowledge or skills to assist with homework and other assignments.

Parent's life's experience and their predominant relationships take place with the Tongan language at their heart. If teachers and administrators want to help parents become more involved in productive ways they might consider communicating and training parents in Tongan,

particularly to train subject related knowledge and skills. However, the findings suggest that parents' English ability influences PI at home and school so teachers and administrators might consider ways to help parents improve parents use of English.

Additional research that determines language ability beyond relying solely on participants perceptions of their own ability and their perception of the effect of language ability on PI should be conducted. This can then be compared with PI frequency as well as student achievement to determine relationships.

Culture of Respect and Duty

One of the most striking findings was not part of the original survey instrument but evolved with each focus group. Feelings about culture and PI were mixed ranging from culture having no effect or positive effect on PI to having negative effect on PI. Positive views focus on relationships and love while negative views focused on obligations and deference to authority.

Respect. A prevailing sentiment was that in Tonga there is a strong culture of respect which was good for students to observe in class but that it had a negative effect on PI as parents would remain silent, or be shy to talk with the teacher, or just agree with the teachers' views and not feel that they had a place in the classroom or to question the authority of the school or teacher. This would be an important foundation of a future study to substantiate this relationship.

Duty. The notion of duty or responsibility to the community was another cultural finding. The number of comments made about the need to fulfil obligations for weddings, funerals, village meetings and so forth were considered to negatively affect the level of PI as well as student achievement. This likewise would be an important foundation of a future study to substantiate this relationship.

Invitations

While there may be things teachers could do to help overcome this there is one particular element of the Hoover-Dempsey and Sandler model that may have great effect to mitigate the effects of respectful silence and that is invitations. Hoover-Dempsey and Sandler (2005) explain that,

> Although strong role construction and efficacy may precipitate involvement, invitations to involvement from members of the school community also serve as an important motivator of involvement because they suggest to the parent that participation in the child's learning is welcome, valuable, and expected by the school and its members…The most important invitations to involvement come from three sources: the school in general (school climate), teachers, and students. (p. 110)

General invitations didn't seem to have great effect on PI but child and teacher invitations did. Invitations from children may be implicit, meaning that parents perceive that their children want/need help or explicit meaning the child extends a direct request for help. Explicit child invitations may be spontaneous or planned, often encouraged by the teacher (Hoover-Dempsey et al., 2005). Based on this research, the frequency of child invitations is also positively and significantly influenced by teacher invitations.

Invitations from teachers are particularly helpful to parents who want to know how they can be involved in the education of their children (Epstein, 1986; Epstein & Van Voorhis, 2001; Hoover-Dempsey et al., 2005). Such invitations also help parents feel welcome in the school and lead to productive involvement when they offer specific suggestions and align with parents' capabilities to comply (Hoover-Dempsey et al., 2005). As shown earlier invitations that include specific suggestions for PI are related to increasing the frequency of PI. Some of the language used to describe teacher-parent interactions amounted to teachers telling or demanding parents to

do things. Potentially, one of the most effective interventions could be for teachers to develop the skill of inviting parents to be involved and to make specific suggestions for that involvement.

Student Achievement

Fan and Chen (2001) propose that even though "the idea that parental involvement has positive influence on students' academic achievement is...intuitively appealing" they believe that most of the literature in this area, is qualitative and that the quantitative research shows inconsistencies. However, after conducting a meta-analysis of the literature they concluded that there is "a small to moderate, and practically meaningful, relationship between parental involvement and academic achievement" (Fan & Chen, 2001). In the current research the correlation between reading at home and English scores and, test-preparation and science scores are encouraging but not compelling. All other parent involvement behaviors that were included in the surveys did not show a relationship with student achievement in the Church schools in Tonga.

In more stratified cultures like the U.S., the correlation between PI and student outcomes may be influenced by higher functioning and higher SES and full family structured groups. In Tonga, children with the best family dynamics in general and differences in SES may not operate the same as in the US, and therefore don't correlate the same way. In Tonga families may be more present or stable, and SES may be less variable. No clear patterns emerged. At best we can conclude based on the current study that PI doesn't have a significant impact on student achievement in English, Math, Science, and Tongan. But this is offered with several caveats.

First, self-reporting by parents may have contributed to confounding results such that parents may have responded based on what they felt would be socially desirable. This may have led to overreporting the frequency of their involvement introducing noise into the data that does

not give a true picture of the variation in the sample. Future research could use instruments that measure behavior frequency based on observation rather than self-reports.

Second, only a limited number of traditional behaviors were included in the surveys. Specific home-based activities were restricted to the following: talking with the child; supervising homework; help child study for tests; practice spelling, math or other skills; reads with the child, and school-based activities only included: help at the school; attend events at school, volunteers for field trips; attend PTA meetings; attends school's open house activities. These may simply not be the most impactful behaviors on student achievement in Tonga. Studying the impact of the important and observed behaviors identified in focus groups may show a greater effect of PI on student achievement.

Third, it may be worth investigating the value of student achievement in Tonga. There may be other reasons that parents are involved in their children's education in Tonga which are not captured by looking only at a relationship with end of year scores. These constructs of achievement may in fact be realized based on the PI that takes place in Tonga, but such a relationship is not found because it is not being looked for. This might include the strengthen of a relationship between the parent and child or increasing the confidence or perseverance of the child. Or PI may result in better attendance or persistence to further education.

Finally, the timing of the parent survey may have presented a problem for some participants. Because of logistical challenges the parent survey data collection was delayed. The survey was given to parents at the beginning of a new school year with the request to respond based on the experience of the previous year. Chronological proximity to the events they were recalling may have led to inaccurate recollection. This may be associated with challenges simply to understand the questions and the time period they are being asked to account for.

This is not a negative finding but rather an opportunity to identify parent behaviors that may be more relevant in Tonga and which were not represented in the instruments used. It is possible that this result simply informs us that the survey process is successful and returns reliable results but that the instruments used may need adaptation to improve relevance to the context in which they are used.

Future Research

Several approaches could be taken to conduct further research.

1. This study could be replicated with other Tongan schools as well as in other cultural settings to define and describe PI in other locations and improve generalizability.

2. A more in-depth study could delve into the antecedents to parents' role construction and self-efficacy. This may require new scales and protocols to link them to each other. Understanding the role of culture and parents' own education experience at home and at school, as a child and as an adult may provide additional insights worth taking into consideration to help parents today, and may provide a framework for working with students now in ways that will help them be involved in their children's education when they become parents in the future.

3. The effect of cultural respect for authority and duty may help to identify potentially unique variables that hinder PI in Tonga. This is hinted at in the qualitative data and could be substantiated through further study.

4. Identifying other measures of student achievement beyond traditional end-of-year subject scores may help to understand the possible broader scope of the influence of PI in Tonga. This may be particularly useful in light of the emphasis place on relationships by participants.

5. As certain PI types were identified during focus groups that were not tested using the Hoover-Dempsey and Sandler instruments there would be great value in determining the relationship between these new behaviors and student achievement.

6. Investigating the relationship between invitations and culture and the potential for invitations to mitigate the effects of the cultural of respectful silence in education could help local administrators frame policy and practice.

Conclusion

This study endeavored to understand parent involvement in Tonga. While many factors contribute to student success, parent involvement is one factor that has consistently shown in other research to have a significant positive relationship. The data gathered during this study in Tonga did not support the predominant findings of other research of a significant positive relationship between parent involvement and student achievement. Although only two parent involvement behaviors (reading, help preparing for tests) were identified that were related to student achievement, the lack of other behaviors influencing student achievement could have more to do with the quality of other behaviors, and that there were numerous other behaviors identified by participants that were not accounted for in the instruments used. It is possible that there are other behaviors not considered in this research that should be investigated as to their efficacy to influence student achievement.

It could be easy for teachers to bemoan what they may perceive as low levels of parent involvement. Rather than continuing in that course, teachers would do well to consider giving attention to the underlying motivators identified in the Hoover-Dempsey and Sandler (2005) model to enhance parent role construction, self-efficacy, and invitations and mitigate the effects of life context variables. An effective starting point would be to help parents understand their role and the value and efficacy of their involvement. This should be accompanied by training and

other opportunities for parents to develop the knowledge and skills that will help them support their children and which may be subject matter related. Helping parents understand that they can engage in effective PI regardless of their level of English ability or education level, by strengthening their relationship with the child and offering their children encouragement associated with expectation in a supportive home. Helping parents communicate effectively with their child does not require English language skills but helping parents improve their English capability may help the parent feel more confident when children bring them work in English.

One of the single most important things that could be done is to help teachers extend effective invitations to parents and include specific suggestions for their involvement of things they can do at home and at school. These invitations may help parents believe more strongly that they should be involved and that their involvement will help their children will make a difference. Invitations may also help parents have the determination to overcome life context variables they might perceive as limiting their ability to be involved. When teachers invite, students are more likely to invite and subsequently parent involvement is more likely to increase. In a culture where respect for authority is highly valued, but which may be hindering parent involvement, an invitation from a teacher to a parent is a demonstration to the parent that the authority figure is inviting them to be a part of their children's education which may embolden the parents to be involved and work in partnership with the teacher.

It is hoped that schoolteachers and administrators in middle and high schools of the Church in Tonga will use this study and compare what they learn about their own schools with the predominant literature on parent involvement from developed countries. This will help them develop and implement research-based parent involvement policies, practice and interventions to improve the types and frequency of family engagement in their schools which in turn could potentially significantly impact student achievement.

References

Adelman, H. S., & Taylor, L. (Eds.). (2010). *Mental health in schools: Engaging learners, preventing problems, and improving schools*. Corwin Press.

Anderson, K. J. (2005). *Understanding parents' decisions to become involved in their children's education* (Publication No. 3181878) [Doctoral Dissertation, University of Delaware]. ProQuest Dissertations Publishing.

Anderson, K. J., & Minke, K. M. (2007). Parent involvement in education: Toward an understanding of parents' decision making. *The Journal of Educational Research, 100*(5), 311-323.

Auerbach, S. (2009). Walking the walk: Portraits in leadership for family engagement in urban schools. *The School Community Journal, 19(1), 9-32.*

Biddle, B. J. (1986). Recent developments in role theory. *Annual Review of Sociology*, *12*(1), 67-92.

Cherryholmes, C. H. (1992). Notes on pragmatism and scientific realism. *Educational Researcher*, *21*(6), 13-17.

Chowa, G. A. N., Masa, R. D., & Tucker, J. (2013). The effects of parental involvement on academic performance of Ghanaian youth: Testing measurement and relationships using structural equation modeling. *Children and Youth Services Review, 35*(12), 2020-2030. DOI: 10.1016/j.childyouth.2013.09.009

Cummins, J. (2008). BICS and CALP: Empirical and theoretical status of the distinction. In *Encyclopedia of Language and Education*, *2*(2), 71-83.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches.* Sage Publications.

Desimone, L. (1999). Linking parent involvement with student achievement: Do race and

    income matter? *The Journal of Educational Research, 93*(1), 11-30.

Emerson, L., Fear, J., Fox, S., & Sanders, E. (2014). *Parental engagement in learning and*

    schooling: Lessons from research. Australian Research Alliance for Children and Youth

    (ARACY) for the Family–School and Community Partnerships Bureau.

Epstein, J. L. (1984a). *Effects of teacher practices of parent involvement change in student*

    achievement in reading and math. Paper presented at the Annual Meeting of the

    American Educational Research Association (New Orleans, LA, April 23-27, 1984)

Epstein, J. L. (1984b). School policy and parent involvement: Research results. *Educational*

    Horizons, 62(2), 70-72.

Epstein, J. L. (1986). Parents' reactions to teacher practices of parent involvement. *The*

    Elementary School Journal, 86(3), 277-294.

Epstein, J. L. (1988). How do we improve programs for parent involvement? *Educational*

    Horizons, *66*(2), 58-59.

Epstein, J. L. (1995). School/family/community partnerships. *Phi Delta Kappan, 76*(9), 701-712.

Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and*

    improving schools (Kindle edition, 2nd ed.). Routlege.

Epstein, J. L., & Dauber, S. L. (1991). School programs and teacher practices of parent

    involvement in inner-city elementary and middle schools. *The Elementary School*

    Journal, 91(3), 289-305.

Epstein, J. L., & Jansorn, N. R. (2004). School, family and community partnerships link the plan.

    The Education Digest, 69(6), 19-23.

Epstein, J. L., & Sanders, M. G. (2002). Family, school, and community partnerships. In M. H. Bornstein (Ed.) *Handbook of parenting: Vol. 5. Practical issues in parenting*. (pp. 407-437). Lawrence Erlbaum Associates, Inc.

Epstein, J. L., & Van Voorhis, F. L. (2001). More than minutes: Teachers' roles in designing homework. *Educational Psychologist, 36*(3), 181-193.

Ewer, R. A., Giles, D. T., Godfrey, A., Godfrey, K., Griffiths, C. P., & Hall, R. L. (Eds.). (2015). *By study and also by faith: One hundred years of Seminaries and Institutes of Religion*. The Church of Jesus Christ of Latter-day Saints.

Fajoju, S. A., Aluede, O., & Ojugo, A. I. (2016). Parental involvement as a correlate of academic achievement of primary school pupils in Edo State, Nigeria. *Research in Education, 95*(1), 33-43.

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1-22.

Ferguson, C. (2008). *The school-family connection: looking at the larger picture. A review of current literature*. National Center for Family and Community Connections with Schools.

Fonua, A. K. B. (2014). *ICT, Tertiary level learners and sustainable development in Tonga*. [Unpublished Masters Capstone Research]. Monash University.

Forte, G. C. (1993). Parental relationships with public schools in Tonga: A hermeneutic study with implications for California educators (Publication No. 9332239) [Doctoral dissertation, University of San Francisco]. ProQuest Dissertations Publishing

Georgiou, S. N. (1996). Parental involvement: Definition and outcomes. *Social Psychology of Education, 1*(3), 189-209.

Green, C. L., Walker, J. M., Hoover-Dempsey, K. V., & Sandler, H. M. (2007). Parents'

    motivations for involvement in children's education: An empirical test of a theoretical

    model of parental involvement. *Journal of Educational Psychology, 99*(3), 532-544.

Grolnick, W. S., Benjet, C., Kurowski, C. O., & Apostoleris, N. H. (1997). Predictors of parent

    involvement in children's schooling. *Journal of Educational Psychology*, *89*(3), 538-548.

Grolnick, W. S., & Slowiaczek, M. L. (1994). Parents' involvement in children's schooling: A

    multidimensional conceptualization and motivational model. *Child Development, 65*(1),

    237-252.

Groves, R. M., Fowler Jr, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R.

    (2009). *Survey methodology* (2nd ed.). John Wiley & Sons.

Harris, A. L., & Robinson, K. (2016). A new framework for understanding parental involvement:

    Setting the stage for academic success. *RSF: The Russell Sage Foundation Journal of the*

    Social Sciences, 2(5), 186-201.

Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic

    assessment of the strategies that promote achievement. *Developmental Psychology, 45*(3),

    740-763.

Hoglund, W. L., Jones, S. M., Brown, J. L., & Aber, J. L. (2015). The evocative influence of

    child academic and social-emotional adjustment on parent involvement in inner-city

    schools. *Journal of Educational Psychology, 107*(2), 517-532.

Hoover-Dempsey, K. V., & Jones, K. P. (1997). Parental role construction and parental

    involvement in children's education. *Presented at the Annual Meeting of the American*

    Education Research Association. https://files.eric.ed.gov/fulltext/ED411054.pdf

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., & Sandler, H. M. (1997). Why do parents become involved in their

    children's education? *Review of Educational Research*, *67*(1), 3-42.

Hoover-Dempsey, K. V., & Sandler, H. M. (2005). *The social context of parental involvement: A*

    path to enhanced achievement (Grant No. R305T010673). Open Educational Resource

    Initiative (OERI). http:// www.vanderbilt.edu/Peabody/family-school/Reports.htm

Hoover-Dempsey, K. V., Walker, J. M., Jones, K. P., & Reed, R. P. (2002). Teachers involving

    parents (TIP): Results of an in-service teacher education program for enhancing parental

    involvement. *Teaching and Teacher Education*, *18*(7), 843-867.

Hoover-Dempsey, K. V., Walker, J. M., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A.

    S., & Closson, K. (2005). Why do parents become involved? Research findings and

    implications. *The Elementary School Journal*, *106*(2), 105-130.

Hunter, D. J., Howes, D., & McCallum, J. (2019). Defining Exploratory-Descriptive Qualitative

    (EDQ) research and considering its application to healthcare. *GSTF Journal of Nursing*

    and Health Care, 4(1). DOI: 10.5176/2345-7198_4.1.202

Jeynes, W. H. (2005a). A meta-analysis of the relation of parental involvement to urban

    elementary school student academic achievement. *Urban Education*, *40*(3), 237-269.

Jeynes, W. H. (2005b). Effects of parental involvement and family structure on the academic

    achievement of adolescents. *Marriage & Family Review, 37*(3), 99-116.

Jeynes, W. H. (2010). *Parental involvement and academic success*. Routledge.

Jeynes, W. H. (2018). A practical model for school leaders to encourage parental involvement

    and parental engagement. *School Leadership & Management, 38*(2), 147-163.

Katenkamp, A. M. (2008). The relation between parents' involvement beliefs and behaviors and

    teachers' perceptions of parents' beliefs and behaviors (Publication No. 304177522)

[Doctoral Dissertation, University of Maryland]. ProQuest Dissertations and Theses Global.

Kim, S. W. (2020). Meta-analysis of parental involvement and achievement in East Asian countries. *Education and Urban Society*, *52*(2), 312-337.

Latu, L. V. L. (2018). Family structure and academic performance of students in secondary schools in the Kingdom of Tonga. (Publication No. 15100) [Master's Thesis, University of Canterbury]. University of Canterbury Research Repository. http://hdl.handle.net/10092/15100

Lavenda, O. (2011). Parental involvement in school: A test of Hoover-Dempsey and Sandler's model among Jewish and Arab parents in Israel. *Children and Youth Services Review*, *33*(6), 927-935.

Lunenburg, F. C., & Irby, B. J. (2002). *Parent involvement: A key to student achievement* [Conference session]. Annual Meeting of the National Council of Professors of Educational Administration. Burlington, Vermont.

MacIntyre, L. I. K. (2008). *Tongan mothers' contributions to their young children's education in New Zealand.* (Publication No. 1398) [Doctoral thesis, Massey University]. http://hdl.handle.net/10179/1398

Mapp, K. L. (2000). *Making the connection between families and schools: Why and how parents are involved in their children's education* (Publication No. 9933144) [Doctoral Dissertation, Harvard University]. ProQuest Dissertations and Theses Global

Mapp, K. L., Johnson, V. R., Strickland, C. S., & Meza, C. (2008). High school family centers: Transformative spaces linking schools and families in support of student learning. *Marriage & Family Review, 43*(3-4), 338-368.

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation.* John Wiley & Sons.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage Publications.

Moore, D. S., & McCabe, G. P., (1989). *Introduction to the practice of statistics*. W. H. Freeman.

Mowder, B. A. (2005). The Parent Development Theory: Understanding parents, parenting perceptions, and parenting behaviors. *Early Childhood and Infant Psychology*, *1*, 45-64.

Murphy, J. P. (1990). Pragmatism: from Peirce to Davidson. *Transactions of the Charles S. Peirce Society, 28*(2), 321-333.

Newchurch, A. (2017). The Impact of parent involvement on student success: school and family partnerships from the perspective of parents and teachers. [Doctoral Dissertation, Kennesaw State University]. Kennesaw State University Digital Commons https://digitalcommons.kennesaw.edu/teachleaddoc_etd/21

Nye, C., Turner, H., Schwartz, J., & Nye, C. (2006). Approaches to parent involvement for improving the academic performance of elementary school age children. *Campbell Systematic Reviews, 2*(1), 1-49. DOI: 10.4073/ csr.2006.4

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage Publications.

Pena, D. C. (2000). Parent involvement: Influencing factors and implications. *The Journal of Educational Research, 94*(1), 42-54.

Pengpid, S., & Peltzer, K. (2018). Parental involvement, health behaviour and mental health among school-going adolescents in seven Pacific Island countries. *Journal of Human Behavior in the Social Environment*, *28*(8), 1068-1077.

Phillips, D. C., & Burbules, N. C. (2000). *Postpositivism and educational research*. Rowman & Littlefield.

Ramirez, A. Y. (2003). Dismay and disappointment: Parental involvement of Latino immigrant parents. *The Urban Review*, *35*(2), 93-110.

Sheldon, S. B., & Epstein, J. L. (2004). Getting students to school: Using family and community involvement to reduce chronic absenteeism. *School Community Journal*, *14*(2), 39-56.

Spera, C. (2005). A review of the relationship among parenting practices, parenting styles, and adolescent school achievement. *Educational Psychology Review, 17*(2), 125-146.

Steinberg, L., & Darling, N. (2017). Parenting style as context: An integrative model. In B. Laursen, & R. Zukauskiene (Eds.), *Interpersonal development* (pp.161-170, 8). Routledge.

Sui-Chu, E. H., & Willms, J. D. (1996). Effects of parental involvement on eighth-grade achievement. *Sociology of Education, 69*(2), 126-141.

Taufe'ulungaki, A. M. (2013). *Annual report of the Ministry of Education and Training*. Office of the Minister for Education and Training.

Tonga Ministry of Education and Training. (2019, December 10). Ministry of Education and Training, http://www.edu.gov.to

Urdan, T. C. (2016). *Statistics in plain English* (4th ed.). Routledge.

Van Voorhis, F. L., Maier, M. F., Epstein, J. L., & Lloyd, C. M. (2013). *The impact of family involvement on the education of children ages 3 to 8: A focus on literacy and math achievement outcomes and social-emotional skills.* MDRC. https://files.eric.ed.gov/fulltext/ED545474.pdf

Walker, J. M., 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), 85-104.

Weinberg, S. L., & Abramowitz, S. K. (2015). *Statistics using SPSS: An integrative approach* [Kindle Edition]. Cambridge University Press.

Weiss, H. B., Lopez, M. E., & Rosenberg, H. (2010). Beyond random acts: Family, school, and community engagement as an integral part of education reform. National Policy Forum for Family, School, & Community Engagement. Harvard Family Research Project. https://eric.ed.gov/?id=ED517978

APPENDIX A

Literature Review

Introduction

Education is a significant contributor to liberation from poverty and opens the door to future opportunities to enable individuals to change their situation and influence the lives and circumstances of their family and community (The World Bank, 2018). Unfortunately, many children in developing countries are often unable to access quality education or perhaps education at all. Distance, poverty, safety, illiteracy, lack of parental support, and overcrowded schools are among some of the factors that impede their right to education. Children in such countries often do not have an equal opportunity to education and parent involvement may be part of the answer (Epstein, 1983, 1984b; Epstein & Salinas, 2004; Henderson & Mapp, 2002; Hoover-Dempsey et al., 1987; Hoover-Dempsey & Sandler, 1995; Mapp, 2000).

In a recent report, The World Bank (2018) highlighted the shortcomings of present education efforts noting that there is improvement in schooling (meaning availability and access) but not in actual learning. They claim that failure to achieve real learning will have significant social and economic implications in the future. They advocate the need to prioritize learning, not just schooling and that to do this will require three complementary strategies:

1. Assess learning to make it a serious goal.

2. Act on evidence to make schools work for learning. Great schools build strong teacher-learner relationships in classrooms.

3. Align actors (e.g., schools, governments etc.) to make the entire system work for learning.

While this report provides current and relevant context for the need to find ways to improve learning, it lacks strong recognition of the role of families in supporting children in

education and discussing whether the unique family environment and support is able to help students succeed irrespective of the gaps in the schools and education in general. This omission is unfortunate as there is general agreement that parental involvement or family engagement has a positive relationship with student achievement (Jeynes, 2005a; Spera, 2005), improves schools, assists teachers, and strengthens families (Epstein, 2018).

Student Achievement and Family Engagement

While the relationship between family engagement and student success has mixed results the findings are overwhelmingly indicate that there is positive relationship between family engagement and student achievement (Henderson & Mapp, 2002; Kramer, 2012; Lunenburg & Irby, 2002; Mapp et al., 2008; Newchurch, 2017; Sheldon & Epstein, 2004; Spera, 2005; Steinberg & Darling, 2017; Van Voorhis et al., 2013).

Some believe that parent involvement-student achievement results may be skewed due to conceptual and methodological problems is several studies which they believe confounds the results (Bakker & Denessen, 2007). They identify the strong emphasis on quantitative methods which makes it difficult to take into account "the complexity and multi-dimensionality of the concept" (p. 188). Particularly they believe that significant biases exist in ratings on questionnaires and propose that more qualitative approaches would allow parents to reveal "the more hidden features of their involvement in their children's education" (p. 188). Fan and Chen (2001) also believe that research shows inconsistencies. However, after conducting a meta-analysis of the literature they concluded that there is "a small to moderate, and practically meaningful, relationship between parental involvement and academic achievement" (Fan & Chen, 2001, p. 2).

A meta-analysis of 41 studies conducted by Jeynes (2005a) reviewed the parent involvement-student achievement relationship among urban elementary school children

determined that there was "a significant relationship between parental involvement overall and academic achievement. This relationship held for white and minority children and also for boys and girls" (p. 237). Hill and Tyson (2009) conducted a meta-analysis of research on parental involvement in middle school which has generally received less research attention compared to elementary level schooling. Based on the 50 studies they investigated, "parental involvement was positively associated with achievement, with the exception of parental help with homework. Involvement that reflected academic socialization had the strongest positive association with achievement" (p. 740).

Kim (2020) conducted a meta-analysis of 15 studies conducted in East Asian Countries and also found a positive relationship between PI and student achievement with the strongest relationship for academic socialization. This positive relationship serves as one of the greatest arguments in favor of encouraging effective parent involvement.

The results of two other studies developing African countries, parallel the outcomes observed generally in developed countries and not just specific to minority groups. In a recent study in Edo State Nigeria, Fajoju et al. (2016) found that parental involvement significantly influenced pupils' academic achievements in English language, mathematics and integrated science, in primary school. Chowa et al. (2013) found that home-based parental involvement in Ghana was positively associated with academic performance, while school-based parental involvement was negatively associated with academic performance. This suggests that family engagement at home and school are meaningfully different constructs in a population of Ghanaian youth and their parents.

It seems prudent to not simply paint the parent involvement-student achievement relationship with one broad brush stroke called success as though all forms of family engagement influence all forms of student achievement. However, it does seem reasonable to conclude that

family engagement could be a significant factor to improve student success and help mitigate institutional, economic and societal challenges affecting availability, accessibility, adequacy and adaptability of education. While attention to family engagement has been slow to emerge in the Global Education Initiative, what parents and families do to support their child's education may have the greatest influence on the academic achievement of their child.

Defining Parent Involvement and Family Engagement

One of the challenges in this field is accurately defining the construct of parent involvement. Referring to early conceptions of PI, Georgiou (1996) cautioned that 'it seems that parent involvement has become a generic term with so many meanings that soon it will have no meaning at all" (p. 206). He then recommends that "it would be preferable to use the specific behavioral indicators rather than the universal and potentially misleading term 'parental involvement' that so often appears in the literature" (p. 206). In an effort to be more comprehensive the current research considers parent involvement by what parents do, when and where they do it, and who initiates it. Each of these aspects will become more apparent in understanding the instruments that were used.

What Do Parents Do?

Many definitions describe parent involvement and even family engagement by what parents do. Dumont et al. (2014) acknowledge that numerous parent actions can be considered as parent involvement, aligning themselves with the definition proffered by Reynolds (1992) that parent involvement can be characterized as "any interactions between a parent and child that may contribute to the child's development or to direct parent participation with a child's school in the interest of the child" (p. 442). Epstein and Sanders (2002) identify specific behaviors such as helping children with homework, attending parent-teacher conferences, volunteering for parent leadership, and attending children's extracurricular activities and Spera (2005) talks about the

need to "monitor [children's] after-school activities, [and] supervising activities with peers" (p. 130).

When Does it Happen?

Others like Nye et al. (2006) focus more on when an action occurs, explaining that "parent involvement is defined as the active engagement of a parent with their child outside of the school day in an activity which centers on enhancing academic performance" (p. 4).

Where Does it Happen?

Some focus on the behavior but then further delineate those to discuss where the behavior occurs. Epstein (1984b) laments that school policies regarding parent involvement sometimes force a choice between at-school and at-home parent involvement both of which have benefits. Hoglund et al. (2015) say that parent involvement is "a multi-dimensional construct that refers to the engagement of significant caregivers into the education of their children at home, such as helping their child with homework, and at school, such as communicating with their child's teacher and supporting their child in school" (p. 517). This idea of home-based and school-based PI is also noted by Green et al. (2007) who explain that

> Home-based involvement is generally defined in the literature as interactions that take place between the child and parent outside of school [and] generally focus on the individual child's learning-related behaviors, attitudes, or strategies and include parental activities such as helping with homework, reviewing for a test, and monitoring the child's progress. School-based involvement activities generally include activities typically undertaken by parents at school that are generally focused on the individual child, such as attending a parent–teacher conference, observing the child in class, and watching the child's performance in a school club or activity. School-based involvement behavior may

also focus on school issues or school needs more broadly, such as attending a school open

house or volunteering to assist on class field trips. (p. 534)

Parent or School Initiated?

Others add to the definitional foray by considering who initiates the behavior (Epstein &

Dauber, 1991). Parent initiated practices "represent parental efforts to become directly involved

with school decisions and activities" while school-initiated efforts "provide parents with routine

information about school policies, procedures, and events, as well as their children's progress.

School-initiated involvement practices also include efforts by the school to announce parent

opportunities to participate on school boards, committees, and parent organizations" (Spera,

2005, p. 128).

Parent Involvement, Parent Engagement, or Family Engagement

Additionally, there is an ongoing shift in terminology used. Early research focused on

parent involvement, while emerging emphases include terms such as family, school, community,

and engagement. Parent involvement is the more dominant and persistent term in this arena but

'family engagement' has emerged strongly in the literature. Parent involvement offers a narrow

view of parental contribution and often restricts the efforts to be those that respond to the

school's desire and invitations only. The addition of 'engagement' in place of involvement is

increasingly popular to suggest a more active role on the part of parents. And replacing parent

with family engagement includes a more active and collaborative role of parents and

acknowledges the changing nature of families in which many children live in unique settings

where their primary caregivers may include grandparents, older siblings, aunts and uncles, foster

care parents and so on. The current study leans toward a view of family engagement that

incorporates the broader definition of parent involvement alluded to by Bakker and Denessen

(2007) that parent involvement includes activities at school, as well as at home, acknowledges

the effect of parent attitudes, and implies increasing responsibility for the parent and the school

to work together to improve student outcomes (Auerbach, 2009; Bakker & Denessen, 2007;

Chowa et al., 2013; Desimone, 1999; Epstein, 1984a; Fan & Chen, 2001; Grolnick &

Slowiaczek, 1994; Hoover-Dempsey & Jones, 1997; Ishimaru, 2017; Jeynes, 2010; Mapp, 2000;

Reininger & Santana López, 2017; Weiss et al., 2010).

For the current research, parent involvement is the construct under consideration and is

considered a subset of family engagement suggesting that claims about parent involvement can

also be considered as applying to family engagement. Thus, 'parent involvement' is the term

that is used most often in the current research, but instances of family engagement and parent

engagement may also find their way interchangeably into the conversation.

Related Frameworks and Theories of Engagement

The research of parenting behaviors and styles (Baumrind, 1968, 1971, 1978, 1991a,

1991b; Darling & Steinberg, 1993) is connected to connected to and in many ways the precursor

to research on parent involvement but focuses more broadly on the role parents play in their

child's education. A meta-analysis conducted by Pinquart (2016) acknowledges that parenting

styles are related to student achievement. While there is ample consideration given to parenting

style and behaviors in general, the family engagement literature emphasizes behaviors that are

more specifically related to education, student achievement and school improvement. There are

numerous models intended to explain or recommend more effective approaches to parent

involvement but not all have parent involvement at their core. There are numerous other

frameworks and theories related to or specifically addressing parent involvement such as the

Comprehensive Supports for Student Learning Theory (Adelman & Taylor, 2010), the Parent

Development Theory (Mowder, 2005), and Parents as Stage setters (Harris & Robinson, 2016).

The Comprehensive Supports for Student Learning Theory

The Comprehensive Supports for Student Learning Theory looks at internal and external barriers (societal, neighborhood, familial, school, and personal conditions) to learning and teaching contribute to active disengagement from classroom learning and lead to significant learning, behavior, and emotional problems (Adelman & Taylor, 2010; Taylor & Adelman, 2000).

The Parent Development Theory

While not directly a framework describing parent or family engagement in education the Parent Development Theory (Mowder, 2005) emphasizes that what parents believe and do changes over time based on internal and external factors. The Parental Development Theory (Mowder, 2005) proposes that the parenting role is not a static experience that remains constant, but that parents develop, and their roles change over time. This parent role change may be influenced by the age, needs and relationship they have with their children as well as other social roles they have including those of friend, employee, learner and the social-cultural expectations and environment. This could help explain why parent engagement diminishes as children get older as parents perceive their involvement is lees needed. Thus, Parental Development Theory (PDT) seeks to construct the parent role by acknowledging internal and external influences on the individual, consider its changing nature over time, and explain its relationship to activities associated with parenting (Becker, 2009; Mowder, 2005). The changing nature of parenting over time also has close ties to elements of the Hoover-Dempsey and Sandler (Green et al., 2007; Hoover-Dempsey & Sandler, 1997; Katenkamp, 2008; Lavenda, 2011) model with its emphasis on the influence that parents' experience and role construction have on their decisions for involvement. This theory further highlights the value of understanding the variables that help or hinder parent involvement and the factors that influence a parent's role construction with regard

to their involvement. If, as this theory proposes, parent behavior changes over time then researching that behavior and its influencers has meaning and relevance.

Parents as Stage Setters Theory

The Parents as Stage Setters Theory adjusts the paradigm of parent involvement to consider it as a phenomena that takes place in the setting or environment that parents create – based on what they do, the resources and experiences/opportunities they provide their children and their individual parenting style (Harris & Robinson, 2016). It proposes a broad contextual role that parents play and although it offers insights into the effect that the 'stage' that parents set might have on student achievement it doesn't quite get to the heart of addressing why parents believe and act the way they do. While this model is contextualized within the broad parameters of parental involvement, its authors see it as profoundly different from the traditional view of parental involvement which includes such things as reading with the child, volunteering at school, homework help, and meeting with teachers. Stage-setting is more about cultivating or elevating the child than producing a particular academic outcome.

Dual Navigation Approach

Recently, Jeynes (2018) proposed the Dual Navigation Approach which clarifies and expands the home-based and school-based components of the parent involvement duality. Jeynes (2018) suggests that models like that proposed by Epstein do not give enough weight of interest or credit to home-based elements of parent involvement. Based on six metanalyses he has conducted over the last 15 years he proposes five home-based and five school-based components that school leaders should emphasize. The drive of this model is to help school leaders navigate and support PI in ways that help these aspects work in unison rather than as competing or unbalanced approaches.

Dual Capacity-Building Framework

Taking a slightly different tack, the Dual Capacity Building Framework for Family-School Partnerships (Mapp et al., 2019) offers a path toward successful change to strengthen PI within organizations. This framework suggests the goals and conditions that are needed for effective family engagement efforts that are linked to student achievement and school improvement. The Dual Capacity-Building Framework:

1. Identifies challenges that need be addressed in order to support effective home–school partnerships.

2. Describes vital conditions for the success of family–school partnership initiatives and interventions.

3. Proposes valuable intermediate capacity goals that should be central to family engagement policies and programs.

4. Describes capacity-building outcomes for families, school and program staff.

Epstein's Model of Parent Involvement

One of the most significant contributors to the parent involvement discussion has been Joyce Epstein who proposed perhaps the most well-known family engagement Model of Parent Involvement (Epstein, 1983, 1984a, 1988, 2018; Epstein & Dauber, 1991; Epstein & Jansorn, 2004). This framework proposes six typologies (Figure A1)of family-school-community partnerships (Epstein, 1995, 2018). It does not represent a system of sequential behaviors or rank order of effectiveness but comprises multiple behaviors that can work together in a holistic approach to improve parent involvement without reference to variables that influence parents' choices of the type and degree of their involvement.

Figure A1

Epstein's Model of Parent Involvement

1. **PARENTING**: Help families learn parenting skills, understand child and youth development, and establish a home environment that supports children as students in ways appropriate to their age and grade level. Help teachers and the school community understand the role and nature of families.

2. **COMMUNICATING**: Develop strategies, policies and practices than enable effective communication between school and home. Inform families about school programs and student progress.

3. **VOLUNTEERING**: Find ways to involve families as volunteers and audiences at the school to support students and school programs. This might require improving recruitment efforts, providing training, and better consideration of work and family schedules.

4. **LEARNING AT HOME**: Encourage, invite and expect families to help their children in learning activities at home. This could include homework and other activities related to the curriculum and class work.

5. **DECISION MAKING**: Establish PTA/PTO, school councils, committees, and other parent organizations where families can assist in school decisions, governance, and advocacy.

6. **COLLABORATING WITH THE COMMUNITY**: Work with the broader community to identify and access resources and services for families, students, and the school. This could include drawing on the experience of businesses, social agencies, as well as reciprocating by providing services to the community.

### *Parent Involvement Theory*

Most theories of parent involvement focus behaviors or actions of parents and their relationship to student achievement. Less attention is given to how or why parents make those decisions of the types and frequency of their involvement. The Theory of Parental Involvement proposed by Hoover-Dempsey and Sandler (1995) suggests several factors to explain why and how parents make decisions about their involvement in their child's education.

While the theory is comprised of five levels which culminate in student achievement it begins with the explanatory constructs for parent involvement (see Figure A2)including motivational beliefs (parent self-efficacy, parent role construction), invitations to be involved (from school, teachers and students), and perceived life contexts (skills and knowledge, time and energy) that lead to forms or types of parent involvement manifest as home or school-based. Others (Anderson, 2005; Green et al., 2007; Katenkamp, 2008; Lavenda, 2011; Walker et al., 2005) have since extended this earlier work delving into socio-economic status and cultural factors as additional influencers in the involvement decisions of parents.

Theory of Parent Involvement

Figure A2

Theory of Parent Involvement
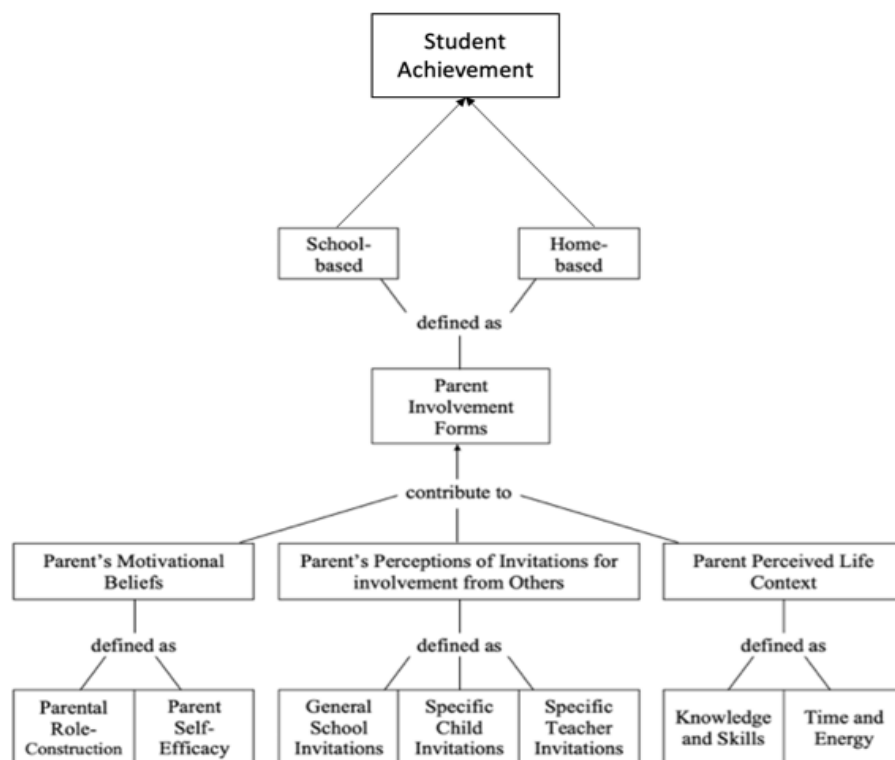
Understanding why and how parents are involved enables educators and parents alike to provide concrete mechanisms and approaches for increasing parental involvement in schools not

just by encouraging behavior but by influencing intrinsic variables within the parent that can increase desire, motivation and confidence as well as external drivers such as life context and invitations.

For the purposes of the current research the following definitions are based on the work of numerous researchers (Anderson & Minke, 2007; Biddle, 1986; Green et al., 2007; Grolnick et al., 1997; Hoover-Dempsey & Jones, 1997; Hoover-Dempsey & Sandler, 1995; Hoover-Dempsey et al., 2005; Katenkamp, 2008; Lavenda, 2011; Van Voorhis et al., 2013; Walker et al., 2005) and provide a reference point upon which the study proceeds with the Hoover-Dempsey and Sandler model at the heart of the research.

Student achievement is the academic performance of students as determined by the school at which the student attends.

Self-efficacy is a parent's belief and confidence that they have the ability to do what is needed and a sense that their efforts will make a difference in helping their child learn and be academically successful (Green et al., 2007; Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Katenkamp, 2008; Lavenda, 2011; Walker et al., 2005).

Role construction is defined as parents' beliefs about what they are supposed to do in relation to their children's education and the patterns of parental behavior that follow those beliefs. Role construction for engagement is influenced by parents' beliefs about how children develop, what parents should do to rear their children effectively, and what parents should do at home to help children succeed in school. Role construction is also shaped by the expectations of individuals and groups important to the parent about the parent's responsibilities relevant to the child's schooling (Biddle, 1986; Green et al., 2007; Grolnick et al., 1997; Hoover-Dempsey & Jones, 1997; Hoover-Dempsey & Sandler, 1995; Hoover-Dempsey et al., 2005; Katenkamp, 2008; Walker et al., 2005).

Invitations for involvement can be direct invitations from school administrators, staff, teachers, students and others that invite parent involvement at home or at school. It also includes implied invitations related to the culture and feel of the school as being welcoming and/or encouraging of parent involvement. There are numerous types of invitation where parents' attitudes, beliefs and behaviors can be affected through actions schools take. These might include such things as, sense of welcome/belonging at the school, frequency of communication with the school, quality of the relationship with the teacher, invitations to school events/relationship with other parents (Epstein & Van Voorhis, 2001; Griffith, 2001; Hoover-Dempsey & Sandler, 1995, 1997; Seefeldt et al., 1998; Van Voorhis, 2001; Van Voorhis et al., 2013; Waggoner & Griffith, 1998).

Life context variables are factors perceived by the parent as either inhibiting or enabling their involvement. They include such things as skills and knowledge possessed by the parent as well as the time and energy they have to be engaged in their child's education. An emerging arena of these variables is considered in the relationship of socio-economic factors and family, community or ethnic cultural factors. (Anderson, 2005; Anderson & Minke, 2007; Green et al., 2007; Tekin, 2016).

Parent involvement forms are the types of behaviors a parent might engage in including behaviors mentioned earlier such as helping children with homework, attending parent-teacher conferences, volunteering for parent leadership, attending children's extracurricular activities, monitoring activities after-school (Epstein & Sanders, 2002; Spera, 2005).

Barriers and Enablers to Engagement

Family engagement research usually focusses on parent behaviors that demonstrate their involvement, with attention given to how schools involve parents. A secondary component of

research in this area considers enablers or barriers to engagement. While many more may be relevant in the broader PI debate, I will present only a few that add value to this research.

Socio-Economic Status

Low socio-economic status is often seen as a barrier to parent and family engagement. Several studies demonstrate that socio-economic status does impact the degree and types of parent involvement (Mapp, 2000; Sui-Chu & Willms, 1996) and student achievement (Desimone, 1999). But it is important to note that lack of involvement is not the same as a lack of desire to be involved. Mapp (2000) noted that the majority of parents, regardless of race, ethnicity, or socioeconomic status, want their children to do well in school and have a desire to help their children succeed and are often involved in their children's education in ways that go beyond traditionally recognized activities.

Family Structure

Using the U.S. Department of Education's National Education Longitudinal Survey (NELS) dataset, Jeynes (2005b) looked for the effects of parental involvement and family structure on the academic achievement of children. Controlling for gender, race, and socioeconomic status he found that family structure was an important predictor of higher adolescent academic achievement.

School Culture

A school's culture is about everyday norms, shared beliefs and agreed roles. Embedding parental engagement in school culture is important because it shifts practice 'beyond random acts' of engagement (Weiss et al., 2010). It makes engagement a core part of the school's everyday routines, links it to strategic planning and performance monitoring, embeds it in teaching practice, considers it in the design of physical spaces, therefore shaping everyday interactions between families and schools.

Research shows that parental perception of how welcoming the school is directly impacting their engagement at school and in family-led learning (Ferguson, 2008; Hoover-Dempsey et al., 2005). Factors that influence a welcoming climate include the implicit and explicit messaging in the design of school entrance spaces, personal contact with school staff, accessible and frequent communication and invitations and opportunities for parents' involvement in school decision-making and activities (Henderson & Mapp, 2002; Hoover-Dempsey et al., 2005).

Leadership, Policies, and Communication

Leadership teams in schools strongly influence the culture of parental engagement in their school communities, highlighting the value of clear, co-designed parental engagement policies, particularly given their enabling effect. The literature suggests that if the development of school-based policies or 'family school agreements' is considered a top-down administrative or reporting requirement, they have very little impact (Coldwell et al., 2003). However, if policies are co-designed with parents, foster a shared understanding of parental engagement in learning and mutual roles and responsibilities, linked to data, evaluation and performance monitoring, they can have a substantial impact (Goodall & Vorhaus, 2011; Redding et al., 2004). In addition to these factors communication and work schedules are among other barriers to effective parent involvement that are often related to school leadership (Hoover-Dempsey et al., 1987; Skinner, 2014).

Parent-Teacher Relationships

Trusting and respectful relationships between families and teachers requires time, effort and skills (Hoover-Dempsey et al., 2005). These may be demonstrated in the communication and invitations between parents and teachers and are crucial to establish effective family-school partnerships (Emerson et al., 2014).

Educational Background

The education level of parents can influence parents' sense of efficacy as well as their belief about their role and the teachers' role. They may feel that they should not question the teacher (Ramirez, 2003) and that the teacher is responsible for formal education of their children (Pena, 2000; Ramirez, 2003). Their own educational background may also influence their knowledge and skills to be involved. Some studies have shown that as parents are invited to draw on their knowledge and skills and have opportunities to become more confident in their own knowledge and skills in specific subjects or general parenting their sense of efficacy of their involvement increases (Green et al., 2007) and they are more likely to increase their involvement (Nye et al., 2006; Van Voorhis et al., 2013).

Language

Parents' language ability can stifle the ability for effective communication between parent and teacher and can inhibit effective participation in school councils and the like as observed among minority Spanish speaking Hispanic parents in the U.S. where most teachers speak only English (Ramirez, 2003). In Tongan schools this communication barrier between teachers and parents does not seem quite as prevalent, however because the schoolwork is in English parents may not feel they have the knowledge or skills to assist with homework and other assignments.

Teachers Leading Parent Involvement

Amid these challenges and conjecture it is important to note that the emphasis on increasing parental involvement is still primarily 'assigned' to educators who are expected to take on the role to design parental involvement programs and extend the invitations and facilitate that involvement or partnership.

The No Child Left Behind Act (2002) encourages family participation, effectively mandating that educators, schools and districts find ways to increase family participation. Much of the associated reform efforts to improve student achievement focus on schools rather than working with parents although it requires informing parents of student progress and options for parents to remove their children from consistently poor performing schools and enroll them in one they believe is better suited to their child (Becker, 2009; No Child Left Behind Act, 2002).

Alas, the emphasis of parent involvement programs continues to focus on training teachers to take the lead and invite participation and design the programs and so forth. While the intent of Epstein (2018) is admirable and even desirable, to promote the notion of school-family-community partnerships, and see this notion addressed in teacher preparation course, its realization has been slow. The hope is to help "prospective and practicing educators gain the knowledge and tools they need to understand and mobilize families and communities to assist children's learning and development…" (Epstein, 2018, p. 9). There is no guarantee that such measures will result in increased parental involvement or partnerships. Parents and communities are themselves free to choose, and while legislation or policy may create some impetus for compliance on the part of schools and communities it is likely problematic to use these same means to direct the attitudes and behaviors of families in this matter.

Again, we see that the school or educator is at the center of, and controlling, these partnerships. As a redeeming factor Epstein (2018) reminds us of five facts that can be readily accepted in relation to the desire to create school-family-community partnerships.

1. All students have families.

2. Teachers and administrators have direct and indirect contact with students' families.

3. Few teachers and administrators are prepared to work with families and communities.

4. We developed programs [might] better prepare educators to [possibly] develop school-family-community partnerships.

5. We need to find ways to implement school-family-community partnerships now.

While Epstein (2018) would accomplish this by developing teacher preparation programs based on sound theory, research and best practice, such an approach may not in fact change attitudes and behaviors of parents or families or communities in ways that see partnerships form nor involvement increase in meaningful ways. Rather, understanding why parents make the decisions they do and the developing ways that may begin with teachers but then enabling the shift of power to the parent to organize and encourage each other may have greater long-lasting effect.

Contexts of Family Engagement Research

While there is a substantial body of literature about family engagement in the USA and other developed countries, its place in developing countries is less known. Little is known about the types and frequency of parent involvement in their schools, or whether theoretical frameworks born out of research in developed countries are relevant in developing countries. This make it difficult for educators and parents to determine whether they should employ such parent involvement strategies as recommended in the literature.

Research of Minority Groups in Developed Countries

There is a growing body of literature that focuses on cultural, economic and language biases that affect family engagement among cultural minority groups who live in developed countries (e.g., Pena, 2000; Ramirez, 2003) which might offer some insight into views and practices of family engagement that exists in the home country of these minority participants. Some have found that the students' race-ethnicity and family income is related to the degree and types of parent involvement and student achievement (Desimone, 1999) and with regard to

parents' expectations for children's educational attainment, grade expectations, childrearing beliefs, and perceptions of parental efficacy and student achievement (Okagaki & Frensch, 1998). Other studies identified that despite culture, and socio-economic status (Inoa, 2017) home-based and school-based involvement practices change over time yet parents continue to be primarily concerned with the emotional well-being of their children.

Research in Developing Countries

Research on family engagement among minority groups in developed countries may offer a starting point for considering the types of family engagement in developing countries. However, the experience of minority groups' family engagement doesn't necessarily transfer directly back to family engagement practices in the country of their nativity. After all, in their home country they may not be a minority, and language, socio-economic and cultural differences may not exist with may act as a barrier in their new country. In several studies in developing countries, the results seem to parallel the outcomes observed generally in developed countries and not just specific to minority groups. In a recent study in Edo State Nigeria, Fajoju et al. (2016) found that parental involvement significantly influenced pupils' academic achievements in English language, mathematics and integrated science, in primary school. Chowa et al. (2013) found that home-based parental involvement in Ghana was positively associated with academic performance, while school-based parental involvement was negatively associated with academic performance. This suggests that family engagement at home and school are meaningfully different constructs in a population of Ghanaian youth and their parents.

Research in Tonga

A quick audit of research in Tonga identifies numerous areas of interest. A representative review of literature found strong research interest in the environment, agriculture and geology (Chen & Brudzinski, 2003; De Paor et al., 2012; Ellison, 1989; Fall, 2005), the economy

(Ahlburg, 1996; Brown & Jimenez, 2008; Horan, 2002; Naidu & Chand, 2012; Orams, 2001), health and science (Foliaki et al., 2011; Fotu et al., 2011; Kirk et al., 2008; Matoto et al., 2014), and policy creation (Amosa, 2007). The influence of tradition and culture on society are also predominant (Burley et al., 2015; Burley et al., 1999; Korn, 1978).

In general, research on education in Tonga has been fairly sparse. Curriculum received some early attention (Taufe'ulungaki, 1979; Thaman, 1995) as well as student experience (Fa'avae, 2016; Sopu et al., 2016) and broader outcomes often categorized as school failure (Tatafu et al., 1997) in relation to the quality of education. Additional research considers the role of teachers (Walshaw & Anthony, 2008) and school leadership (Cardno & Howse, 2005).

A Tonga Education Sector study (Catherwood et al., 2003) sought to find ways to improve efficiency and effectiveness in educational planning and delivery in Tonga. Among the recommendations for improvement there is no reference made to the role of parents and families in improving student outcomes. This suggests that family engagement is not a priority at a system level and therefore not embedded in policy or practice among schools, families and the community in the Tongan education system.

Parent Involvement Research in Tonga

Only four studies could be found that exhibit a close relationship to parent involvement and family engagement related research in Tonga. Of the four studies referred to in the previous paragraph only two studies were specifically interested in aspects related to parent involvement but were conducted outside of Tonga (Forte, 1994; MacIntyre, 2008). Research by Forte (1994) and MacIntyre (2008) were conducted in California and New Zealand respectively but both consider the parent involvement experience of Tongan natives in their non-native country. Both note the influence of Tongan culture and language and their influence on role construction and

self-efficacy but as these studies occurred outside of Tonga it's hard to know if these factors would play the same role among parents in Tonga.

The other two (Latu, 2018; Pengpid & Peltzer, 2018) were conducted in Tonga but were not directly addressing questions about parent involvement. Pengpid and Peltzer (2018) were looking at parent involvement in adolescent health but identified an education related outcome. And the final study by Latu (2018) investigated the relationship of family structure to student achievement, but not parent involvement per se. In these studies, the connection to parent involvement in education was almost just a side note to their main aim. The current research appears to be the first study to consider PI specifically among Tongan parents in Tongan schools.

A Final Word

There is a large body of literature in developed countries on parent involvement and family engagement. It highlights the strong relationship between family engagement and student achievement and acknowledges that there is still much debate to define it consistently. Numerous variables inhibit family engagement and many of these particularly affect minority groups. Most frameworks and theories focus on observable behaviors and their relationship to student achievement while less attention is given to understanding why families engage in different ways. The Hoover-Dempsey and Sandler (1995, 1997, 2005) theory of parent involvement is one model that attempts to address why parents behave the way they do in relation to their child's education.

There is far less research that considers family engagement in developing countries which makes it difficult for education leaders and parents there to embrace the predominant research as being transferable to their setting. Of the research on family engagement that does exist in developing countries there seems to be some broad similarities to the research in developed countries particularly about the desire of parents for their children to do well and the positive

relationship the exists between family engagement and student achievement. What is lacking in developing countries is research that identifies the motivators that enable or inhibit family engagement and whether these are similar to findings in developed countries.

Even more limited in scope is education related research *in* Tonga and even less attention is given to research there on family engagement. Understanding these motivators among parents in developing countries and specifically Tonga and how they fare in light of the plethora of research in developed countries. Establishing connection points between research in Tonga and the developed world can build the confidence of school leaders and parents in the predominant literature and enable them to make informed, educated decisions and develop programs, policies, processes and products that are relevant to their context.

APPENDIX B

Method

Introduction

Most research on the relationship between student achievement and family engagement has been conducted in developed countries and defines parent involvement from the school perspective relying on constructs that are indicative of behaviors seen to be effective for white-middle class parents. Of particular interest to school administrators, and course developers alike is whether the predominant family engagement research is relevant in the Tongan setting. While there is a significant amount of research about parent involvement in developed countries these same frameworks and theories have received little attention in developing countries and virtually none at all in Tonga.

Sound research to better understand family engagement in Tonga and why and how parents arrive at their decisions to be involved can help inform the content and instructional design of resources intended to help parents develop the knowledge, skills and attributes to be more effectively engaged. Unfortunately, administrators and teachers in Church schools in Tonga know very little about the types and frequency of parent involvement in their schools. Further they have no data to help them know whether theoretical frameworks originating in developed countries are relevant in their context and whether they should employ family engagement strategies recommended in the literature.

Approval

This study was approval by the Institutional Review Board (IRB) at Brigham Young University on November 9, 2019. The approval included the collection of questionnaire data, focus group data and educational achievement scores. This approval was granted by the IRB, in conjunction with the written notification of permission from the Education Research Committee

and the Director of Church Schools of The Church of Jesus Christ of Latter-day Saints. The Director of Church Schools notified school Principals and Area staff of the approval in preparation for the research. Appendix C includes copies of the several approval communications just mentioned.

Theoretical Considerations of the Approach to Research

According to the Australian Research Alliance for Children and Youth (2015) Gathering and using quality data can improve practice in education by enabling "more robust, data-driven decision-making" which supports "high value investment decision-making where time and financial resources are limited." (p. 21) Accordingly, research design is an important decision that can assist or stifle the research process. As Creswell (2009) explains, "The overall decision involves which design should be used to study a topic. Informing this decision should be the worldview assumptions the researcher brings to the study; procedures of inquiry (called strategies); and specific methods of data collection, analysis, and interpretation. The selection of a research design is also based on the nature of the research problem being addressed, the researchers' personal experiences, and the audiences for the study" (p. 3). Three broad approaches are the most commonly considered. Qualitative and quantitative methods sit at either ends of a continuum with mixed methods at the center (Creswell, 2009; Newman & Benz, 1998).

In determining the methodological approach to take, primary consideration should be the nature of the research question(s). The quantitative-qualitative dichotomy view fades away and the decision focuses on which approach will best accommodate addressing the question (Newman & Benz, 1998). Ercikan and Roth (2006) also recommend that research questions rather than preference of method should determine the course that research takes, and that three classifications of questions research should answer are:

1. What is happening?

2. Is there a systematic effect?

3. Why or how is it happening?

In response to this philosophy this dissertation takes into account each question. First, it considers the environment of family engagement in the Church schools in Tonga and is primarily observational or descriptive in nature. Accordingly, the initial phase of this research scans the landscape of the literature gathering information as it exists with no initial assumption or hypothesis of what to expect. It looks at the environment surrounding the Church schools in Tonga and seeks the voice of the parents and teachers in identifying behaviors and beliefs held by participants about family engagement. Second, this research seeks to understand why or how family engagement is happening. Attempts were made to identify parents' and teachers' perceptions in areas related to the Hoover-Dempsey and Sandler (2005) model. These were analyzed to consider how certain variable influenced the types and degree of parent involvement, as well as the relationship between PI behaviors and student achievement.

Seeking answers to these questions suggests that methods associated with both qualitative and quantitative methodologies might elicit the desired information. Certain elements such as parent/guardian behaviors and student performance and educational approaches for example, can be collected and reported using quantitative approaches but in seeking direction or counsel on processes to improve performance, or access to better education a qualitative approach may be preferential via focus groups.

This perhaps follows some of the historical reaction to the dominant quantitative approach of the social sciences which continued in to the 1980s but which view was contested in the 60's and 70's as researchers sought to account for the achievements of students in a complex

environment and while searching for policy tools acknowledged that a purely quantitative approach did not adequately explain the phenomena being observed (Newman & Benz, 1998).

In this same vain a purely quantitative approach to understanding educational needs in diverse global settings could fail to account for the complexity of the social setting which may be best examined and described by qualitative methods. Similarly, a purely qualitative approach to understanding family engagement may evoke deep emotions and help to derive theory from practice but may fail to confirm the urgency, breadth and depth of the educational situation in the same way that quantitative methods could (Newman & Benz, 1998).

It should be noted that in approaching this research the intent is not to gather data from a multitude of global locations and analyze or interpret them looking to inform theory or even to infer a relationship back to any overarching population. Rather the current research is limited to a single country, and only four schools all sponsored by the same religious organization. An existing survey instrument was employed which has demonstrated validity and reliability over time and the structure of the focus group interviews will be created in response to the literature and the survey data.

At any rate, as we consider the initiating environment a positivist, quantitative approach (Creswell, 2009; Phillips & Burbules, 2000) justified the use of existing surveys which enabled the researcher to stay aligned with the primary theoretical framework and gather data across many factors. Data analysis began with exploratory factor analysis and reliability testing to create explanatory and outcome variables, and to establish confidence in the collected data and instruments used. That being said, qualitative focus groups allowed the researcher to learn how parents and teachers defined and experienced PI without imposing terminology or models upon them. This gave an authentic voice to the data and humanized the results. The Tongan perspective was captured, loosely framed within the context of the theoretical framework but

allowing participants to use their own language and words to express their understanding and experience of the construct without being limited to the narrow conversation and terminology of the surveys.

The social constructivist (Creswell, 2009; Crotty, 1998) approach also carries weight and meaning when we look at the potential outcomes of the research, perhaps informing the development of parent interventions and training. Because the intent of this exploratory descriptive research is to inform the development of programs and identification of curriculum to the end that student achievement improves, combining the quantitative, positivist approach to understanding the reality of family practices and student achievement with a more qualitative approach to interpreting the values and feelings of parents, teachers and leaders about the types and frequency of family engagement in Tonga and the desire of schools to influence change, these two paradigms combine to a sensible mixed methods approach. A decision to combine these approaches may be better deemed as pragmatism (Cherryholmes, 1992; Murphy, 1990; Patton, 2002)

In the pragmatist view, researchers focus on the problem and incorporate all available approaches to understand it (Creswell, 2009). Such provides a foundation justifying a mixed methods approach in elements of family engagement. Thus, to obtain a detailed, comprehensive view of family engagement in different locations a pragmatist, mixed methods approach was chosen. Surveys from the quantitative realm allowed the research to stay aligned closely with the primary theoretical framework and gather a substantial amount of data across many constructs. This allowed the researcher to establish the reliability of the instruments while being able to conduct in depth analysis of the relationships among the participants to the constructs and ascertain how the elements of the Hoover-Dempsey and Sandler (2005) model interact with each other. Focus group interview strategies from the qualitative arena gave an authentic voice to the

data and humanized the results. The Tongan perspective was captured loosely framed within the context of the model but allowing participants to use their own language and words to express their understanding and experience of the constructs without being limited to the narrow conversation and terminology of the surveys.

Background

Tonga Education Profile

Imagine if you never went to school as a child or your own formal schooling finished at the end of primary school. As a parent how do you feel about being involved in your children's education? What if your children attend an English-speaking school and English is not your native language? What does your involvement in your children's education look like? Perhaps you were taught all your life to respect, and not to question authority. What sort of relationship do you have with your children's schoolteachers? Or maybe you're a teacher in a small developing Pacific island nation and the predominant research and theories about parent involvement come from large developed countries? To what degree can you confidently rely on those findings to inform your parent involvement practices? These real-life scenarios are just some of the stories gathered during focus groups and surveys with teachers and parents in Tonga in this study of parent involvement.

Formal education in Tonga is free for primary education, compulsory up to age 14 and is comprised of a system of school and grade levels shown in Table B1. While Tonga has enjoyed a long period of formal education and experiences generally high literacy rates there are still numerous aspects left wanting. Public service downsizing in 2008 decreased the number of primary school teachers from 759 in 2004 to 665 in 2008 resulting in a high teacher/pupil ratio and secondary schooling and higher education also struggle to retain qualified and experienced teachers who migrate overseas (Fonua, 2014). The Church of Jesus Christ of Latter-day Saints

first opened schools in Tonga in 1892 (Ewer et al., 2015) and currently operates 5 middle and 2

high schools (see columns labelled LDS in Table B2). The high schools report a teacher to

student ratio of 1:18 while the middle schools average a teacher to student ratio of 1:24.

Table B1

Tongan School System*

School level	Class level (age)	Total students	All Non-government/mission school students	LDS students	Total schools	All Non-government/mission schools	LDS schools
Primary	Class 1-6 (age 6-11)	17,273	2,515 (14.6%)	Not specified	130	19 (14.6%)	0 (0%)
Middle	Form 1-2 (age 11-13)	14,940	10,264 (68.7%)	2800[**] (18.7%)	54	38 (70.4%)	7 (13%)
High	Form 3-7 (age 12-18)						

* Information comes from Tonga Ministry of Education and Training (2019) and Taufe'ulungaki (2013)
** 2019 enrolment data obtained from Area Office records

Confounding Variables

As with all research there is the possibility of confounding variables. One of the more

obvious in this study is the language of home and language of research. To alleviate this, the

parent survey instrument was administered in Tongan. The teachers all speak English at a high

level of proficiency and were able to complete the survey and participate in the focus groups

with ease. During parent focus group interviews an interpreter was available to translate but was

only needed in one of those groups. The culture of family, community, country, school and the

demographics and relationships between guardians and students may also influence results.

Instruments and focus groups allowed parents and teachers to respond to related items with

encouragement to elaborate on the influence of confounding variables on their response.

Limitations (External Factors)

Language. Instruments and focus groups were conducted in both English and Tongan with interpreters available at parent focus groups and the parent survey being administered in Tongan.

Proximity of Parents to School. Transport is an issue in Tonga and may have inhibit some participation in focus groups held at the school although none were specifically reported. The voice of parents of boarding students at Liahona High School may be missing and should be given consideration in future research.

Parent Willingness and Availability. Desire and availability/time to participate may limit responses. It is possible that participation was biased toward those who are more actively engaged in their children's education as demonstrated by their willingness to participate.

Delimitations (Self-Imposed Constraints)

Availability and Access to Email, Social Media, and Internet. Administering surveys using technology has the potential to reach a broader audience, but also to exclude some who don't have the necessary technology. This was not a problem for teachers who are provided with computers and access to the school's internet service. All parents though did the survey on paper and responses were then entered into Qualtrics by the researcher to prepare the data for exporting to SPSS.

School Level. Not including Primary school level limits the findings to the middle and highs school setting. There are no primary schools of the Church in Tonga.

Church Schools. Conducting the study only in church schools elicited data that are relevant to the unique religious setting that exists there. It is possible that the data obtained are strongly influenced by the Church culture to which parents and even teachers are a part. This

influence of church culture may be worth considering in a future study to ascertain its influence on PI.

These limitations and delimitations restrict the generalizability and transferability of the results, keeping them within the realm of the Church schools. The approach taken to conduct the research may provide a model however for research in broader settings. Others may use their own judgement and consider relevance of findings to their own circumstances whether they are associated with religious school settings, or a developing country location and so forth.

Translation

Teacher surveys and focus groups were all conducted in English. In preparing the teacher surveys the researcher consulted with the Principals and counselors at each school. It was determined that the questions were appropriate as written and that all the teachers had sufficient English capability to understand each question and complete the survey accurately in English. Parent/guardian surveys and consent forms were translated and administered in Tongan and were deemed to be at an appropriate level for parents to be able to complete. During parent focus groups a translator was present to translate as necessary. All survey instruments and information and permission documents were initially translated using a free translation service at (accessed on August 1, 2019 at https://tradukka.com). After this first translation the surveys were reviewed by an independent native Tongan professional translator to verify and improve accuracy of translation service. A final translation review was conducted by principals or assigned staff at the Church schools.

Research Methodology

The current study is grounded in educational, developmental and cognitive social psychology. Methodologically qualitative in nature (Hunter et al., 2019; Patton, 2002), testing specific hypotheses is not the primary intent of this research however as quantitative methods

were also employed to gather and analyze data the general null hypotheses that there is no difference in the way participants responded or how factors behaved stands in each test and significant differences are discussed. Instead all data were analyzed from a holistic paradigm. This is not to say that elements weren't considered individually, and certainly the instruments and protocols were aligned with key theoretical frameworks. Rather than simply hypothesizing whether the constructs, as they existed prior to the study, did or did not account for the Tongan perspective, participants were encouraged to respond to surveys and in focus groups and allow their perspective to emerge from the data.

Subsequently a more complete understanding was obtained of parents'/guardians and teachers' perceptions of family engagement beliefs, behaviors, and motivators in middle and high schools of the Church in Tonga. As this construct has received little to no attention and the instruments have never before been used in Tonga this is an appropriate approach to take to establish a foundation for future research to clarify and test the findings of the current research. The rigor employed to analyze and interpret the data in this study is also encouraged by the likes of Sandelowski (2010). Both qualitative (focus groups) and quantitative (surveys) methods were employed to gather the data.

Research Questions

The current study explored how parents and teachers in Tonga define and practice family engagement. It identified the types and frequency of parent involvement behaviors and the factors that influence parents' choice about the types of their engagement practices. Although many questions could be answered about parent involvement based on the data gathered, three particular questions governed the current research.

1. How do Tongan parents/guardians and teachers perceive parent involvement in Church schools in Tonga?

2. What is the relationship between the motivating factors (motivating beliefs, invitations and life context) of parents in Tonga and the forms of parent involvement?

3. What is the relationship between forms of parent involvement and student achievement in Church schools in Tonga?

The research questions were investigated on face value and in more depth by considering each against demographic data using various methods of analysis. Census and representative sampling were used to gather data for survey and focus groups respectively. Quantitative data was entered into SPSS which is a statistical software program that enabled the researcher to conduct descriptive analysis of the data as well as factor analysis, reliability tests, t-tests, ANOVAs and regressions. NVIVO 12Pro was used to analyze the quantitative data derived from the focus groups and several open-ended questions that were included at the end of each survey. This quantitative data went through open and axial coding to identify themes that could support or refute the findings of the quantitative data. The remainder of this appendix will provide more detail about the approach taken in sampling, data collection, translation and data handling and analysis.

Sampling

The target population was the parents/guardians and teachers in three middle schools and one secondary school of The Church of Jesus Christ of Latter-day Saints in Tonga, on the main island, Tongatapu. One of these schools offers boarding for up to 100 students from surrounding islands and other countries. Because of the uniqueness of the situation for boarding students and the parent/guardian and the barrier that distance places between these students and their parents and the impact on their level of involvement parents of boarding students were not included. It is recommended that their unique situation be considered in a future study. Teachers and

administrators at each school were easily accessible as were parents/guardians whose children stay in their home each night (i.e., not boarding students).

Conducting the study only in church schools means the data obtained are relevant primarily to the unique setting that exists there. It is possible that the data obtained will be strongly influenced by the Church culture to which parents and even teachers are a part. These limitations and delimitations restrict the generalizability and transferability of the results, keeping them within the realm of the Church schools that participated in the study. The approach taken to conduct the research may provide a model however for research in broader settings.

Census

A census approach (Groves et al., 2009; Moore & McCabe,1993) was employed to invite all teachers and all parents of children attending middle and high schools of the Church on Tongatapu to take their respective survey. All teachers had a computer and access to the school internet service and were sent an email with a link to the survey on the morning the survey was administered. Some teachers did not receive a link directly and were given access to the survey via an anonymous log in process during the instruction period. In the last week of school, teachers gathered together in the computer lab at their respective school where a detailed explanation was given to them about the purpose of the survey and an explanation that participation was voluntary and teacher confidentiality was assured. Teachers then logged into the Qualtrics survey which took about 25 minutes to complete on average. The data was subsequently exported as an SPSS file to a secure cloud drive. Some teachers were not able to attend and complete the survey due to professional responsibilities including administering and moderating exams.

Because parents did not have reasonable access to computer and internet access to complete the surveys school administrators sent a copy of the parent/guardian survey home with

at least one student per household. If parents had more than one child in a church school, they were instructed to complete just one copy per household and respond to the survey focusing their responses relative to just one of their children and to indicate the grade of that child on their survey.

Because of year-end logistical challenges the parent/guardian survey was not administered at the same time as the teacher survey. Instead it was distributed at the beginning of the school year and parents were asked to respond to the survey based on their experience of the previous year. Surveys were returned in a sealed envelope with their child's name on the envelope for comparison against a master list of households. School staff followed up with parents/guardians who did not returned their survey within 72 hours to invite them to complete the survey. This procedure occurred at least two times. After 7 days had elapsed the collected surveys were scanned and uploaded to a secure cloud drive. All other electronic and paper copies of the surveys were subsequently destroyed. The researcher then entered the survey data into Qualtrics and exported SPSS files to a secure cloud drive ready for analysis.

A strong effort was made to gather just one survey per household, so the same view of any one parent or guardian was not overrepresented. Thus, prior to the research the researcher reviewed student enrolment lists to try and determine the number of households represented in the student enrolment data. Table B2 shows student enrolment and Table B3 shows household information and the participation rate that was achieved. When surveys were returned considerable effort was made to again limit responses to one per household. Several duplicate households were identified, and the survey used in those cases was the one that noted the oldest child in the family based on the grade at school. Several surveys were also returned without a signature granting permission to use the data or they were blank. These were not included in the count of surveys. We had a 43% (n=503) response rate from parents.

Table B2

Student Enrollment Data for Participating Schools

School	Grade levels	Student ages	Number of teachers	LDS enrolled	Non-LDS enrolled	Boarding students	Total enrolled excluding boarding students
Havelu Middle	7 to 9	11 to 14	20	357	6	0	363
Pakilau Middle	7 to 9	11 to 14	11	247	2	0	249
Liahona Middle	7 to 9	11 to 16	12	272	0	0	272
Liahona High	10 to 13	14 to 20	63	1101	26	125	1002
Total	7 to 13	11 to 20	106	1977	34	125	1886

Table B3

Potential Households and Survey Return Rate from Parents

School	Proportion of student enrolled	Potential multiple students in households*	Number of distinct households^	Proportion of households^	Return rate for 95% confidence level** (n=315)	Usable surveys returned^^	Return rate from households
Havelu Middle	19%	80	283	21%	66	110	39%
Pakilau Middle	13%	73	176	13%	32	161	91%
Liahona Middle	14%	78	194	14%	36	63	32%
Liahona High	53%	312	690	51%	127	139	20%
Other						32	
Total	100%	543	1343	100%	315	505	43%

* A thorough review of the student records identified multiple students registered with same parents/guardians or addresses as at least one other student at one of the four schools in the study

** confidence level recommendation for number of surveys to collect

^ The Intent was to conduct a census of every household. 1500 surveys were distributed to households across all four schools. Figures in this column (total enrolled – potential multiple students)

^^ Several surveys were returned that were not signed to authorize use or were more than 50% incomplete. These were not included in the data.

Purposeful Representative Sample

Focus groups consisted of a purposeful representative sample (Groves et al., 2009;

Urdan, 2016) so that the parents and teachers selected represent the composition of the broader

school, including the spread of parent age and experience, gender, the child's grade level for parents, or for teachers the grade level they teach. Parents/guardians whose children stay in their home each night (i.e., not boarding students), and/or live close enough to the school to be contacted were invited to participate. For focus groups – those living close enough whose children attend the same school or who can get to their respective schools were invited to participate.

School administrators helped identify and invite focus group participants. It is possible that focus group composition may be affected by whether or not the participants are able, willing or available. Fortunately, and surprisingly all those that were invited accepted the invitation to participate and joined their respective groups.

Data Collection

Two methods were employed to gather data in this study. Surveys were conducted with teachers and households collecting 89 (84%) and 503 (38%) useable surveys respectively. The instruments for each group were different but related and were originally developed or adapted by Hoover-Dempsey and Sandler (2005) and then revisited and improved by Walker et al. (2005) and Green et al. (2007).

Quantitative Methods

The current research used survey instruments developed or adapted by Hoover-Dempsey and Sandler (1995, 1997, 2005) to test their model of parent involvement (Green et al., 2007; Lavenda, 2011; Walker et al., 2005). Discussion of these instruments including reliability and validity results will occur in the next chapter. There are variations of opinions about instruments that rely primarily on self-reports (Schwarz et al., 2010) and the effect of question wording, format, and context on the accuracy of responses (Schwarz & Oyserman, 2001). Morsbach and Prinz (2006) caution that parental self-report is susceptible to biases and advocate for additional

research on ways to improve self-report and highlight the need to ensure that respondents understand the questions and accurately recall relevant behavior which can then be applied accurately to the available response format. It is important to note that anecdotal feedback did report that some parents struggled to complete the survey. To improve trustworthiness of the research parents and teachers were both surveyed to ascertain their perspectives.

In addition to considering the use of a multiple informant approach in quantitative research Bakker and Denessen (2007) recommend employing at least some qualitative method(s) to help assuage the potential bias that may arise in a purely quantitative self-report method. The current study used surveys as a primary quantitative method with qualitative support gathered in focus groups.

Parent Survey

The parent survey was comprised of seven sections with a total of 66 items. Three open ended questions at the end of the survey allowed parents to explain how they felt culture, religion and English language affected parent involvement. In section A parents responded about their role activity beliefs and their valence toward education based on their experience as children. Section B and parents considered their self-efficacy for helping children succeed. Section C, D and E asked parents to consider the nature and frequency of invitations from the school, their children and the teachers respectively. Section F was divided into two parts to consider how parents perceived their time and energy and knowledge and skills for PI. The final section, G, looked at the frequency that parents engaged in specific activities and was categorized as either home or school activities.

Teacher Survey

The teacher survey was comprised of six sections with a total of 73 items. Three open ended questions at the end of the survey allowed parents to explain how they felt culture, religion

and English language affected parent involvement. Section A allowed teachers to reflect on their own sense of efficacy about teaching. Section B and C invited teachers to consider their beliefs about the importance of parent involvement parents' efficacy for helping children succeed. Section D teachers reported how important certain PI behaviors were, and in section E they reported the percentage of parents that were involved in specific PI behaviors. In the final section teachers reported on the types of invitations they would extend to parents regarding PI.

Permission to Use Instruments

The survey instruments for the current study are gratefully used with permission from the authors of the instrument and accessed from The Family-School Partnership Lab (Hoover-Dempsey et al., 1992; Hoover-Dempsey et al., 2002; Hoover-Dempsey et al., 2003; Hoover-Dempsey et al., 2005; Walker et al., 2005). Formatting adjustments were made, and informed consent statements were added to allow easier administration of the survey.

Qualitative Methods

While many simply separate the two approaches to research, Ercikan and Roth (2006) argue that:

> the quantitative-qualitative dichotomy is not appropriate for distinguishing forms of education research because, (a) all phenomena are quantitative and qualitative at the same time; and (b) data construction processes follow similar interpretation processes for all education research; and (c) for most constructs that education researchers are interested in, these data construction processes are based on subjective, defensible judgments. (p. 18)

Surveys and the like, limit the depth of responses to quantitative measures such as frequency scores or other Likert scales which only tell part of the story. Most research using this

methodology have defined family engagement from their perspective in their own terms (Adams, 2016). In the current study opportunities were given to participants during focus group interviews to share their engagement practice in their own words and from the ensuing discussion I sought to infer a definition that reflects family engagement as understood and practiced by Tongan parents/guardians and teachers.

In social science research there is value in using focus groups to "yield data on the meanings that lie behind those group assessments" and "throw light on the normative understanding that groups draw upon to reach their collective judgements" (Bloor et al., 2001, p. 4). While focus groups provide an opportunity to delve into group norms they also highlight the challenge that such norms are applied to decision making and policy problematically (Bloor et al., 2001).

The purpose, size and composition of a focus group is important. They are intended to provide insight and understanding as to how people have experienced, feel or think about an issue, concept, service or product. Participants are selected because they possess attributes related to the research at hand, with each group consisting of 5-10 people (Krueger & Casey, 2014). In this research there were between 7-8 participants each purposefully selected to ensure a breadth of characteristics. Teachers were selected at each school to ensure gender representation, age, grade level and teaching experience. Parents were selected to similarly represent a cross section of gender, age, child age and parent experience.

One of the challenges to focus groups is the reluctance of participants to report atypical or deviant behaviors in a public setting rather than in an interview or survey setting (Bloor et al., 2001). This supports the use of surveys to crosscheck responses to some degree.

There are numerous ways to use focus groups. They can be used as a pre-pilot method to gather preliminary data to inform survey design or to identify contextual data to an intended

study, or even to create a taxonomy of language. They may also be used to interpret or evaluate results (Krueger & Casey, 2014) gathered in research already conducted. This use can assist the researcher to better understand the attitudes and behaviors reported by study participants (Bloor et al., 2001). It is this second use to interpret and evaluate results, that is employed in the current research. Survey collection is the primary data set and after an initial review of the data, focus groups data will be used to enhance the findings about how participants understand and demonstrate the construct of family engagement, thus providing deeper meaning to the response they provided in the surveys. This also helps to verify or contradict what is learned from the surveys. I acknowledge that using a focus group in this way does not provide validation of initial analysis per sé, but it does allow for the discovery of additional data perhaps not found in the initial study and to clarify the findings (Krueger & Casey, 2014).

Focus groups were conducted with parents (3 sessions, n = 18) and teachers (4 sessions, n = 29). Each group was limited to six to eight participants to allow more time for those in attendance to share their thought, feelings and experiences. This is well within recommended participant limits of between four and twelve (Cohen et al., 2013; Guest et al., 2013) or five to ten people (Krueger & Casey, 2014).

Parent Focus Groups

Parents with children attending two of the three middle schools and the high school of The Church of Jesus Christ of Latter-day Saints in Tonga were invited to come to their child's school on a particular day and time to participate in a focus group. Each focus group was limited to 6-8 participants.

Teacher Focus Groups

Teacher focus groups were held at each school. Principals helped to identify participants to ensure there was a good representation including such things as having one teacher from each

grade at that school, teachers known to encourage good parent participation and others who do not. Each focus group will be limited to 6-8 participants.

Because focus groups include discussion of personal opinions, extra measures were taken to protect each participant's privacy. The researcher began each focus group having each participant sign the consent form, and by asking the participants to agree to the importance of keeping information discussed in the focus group confidential. asked each participant to verbally agree to keep everything discussed in the room confidential and reminded them at the end of the group not to discuss the material outside.

The focus group protocol was very similar for both groups, but parents and teachers were kept separate, so the presence of the other group did not inhibit their responses. The protocol was aligned closely with Hoover-Dempsey and Sandler's (1997) Parent Involvement theory and open-ended questions were very similar for both parents and teachers. This provided a series of questions to guide a semi-structured open process. The intent of the focus groups was to give parents and teachers an opportunity to raise issues and engagement items that may not have been present in the survey. The surveys allowed the researcher to evaluate the Tongan parent experience and teacher perception relative to the predominant literature. New elements of family engagement in Tonga were identified that were not explicitly obvious in the surveys. This will help to inform the adaptation of current instruments and include context relevant items.

Individuals were invited to participate with an introductory phone call and detailed explanation of the process and purpose and its voluntary and confidential nature. When the focus groups began participants were asked to reflect on their own experience with education at school and at home. They were then asked how they would explain what parent involvement is to a friend or colleague without receiving a previous definition from the facilitator. Additional questions allowed participants to identify specific types of PI behavior, consider their relative

importance and share examples of using these behaviors. They were then invited to identify factors that might enable or inhibit parent involvement and specifically consider the effect of culture, religion and language on PI. This allowed "participants [to] interact with each other rather than with the interviewer, such that the views of the participants [could] emerge – the participants' rather than the researcher's agenda can predominate" (Cohen et al., 2013, p. 377).

Audio and video recordings were made during the focus group. Transcription were done as soon as possible after each focus group has been held and uploaded to NVIVO 12PRO. Names of individuals and places and other identifiable features were changed so participants are not identifiable. Coding of the data went through several iterations using deductive and inductive methods looking for themes and relationships as open and axial coding was conducted.

Data Security

Survey data, recordings and transcriptions are stored by the principal researcher in a lockable filing cabinet that only they have the key to. Only the primary investigator has access to a master list with names and number codes. The principal researcher uploaded and saved data to a password protected USB drive and to password protected cloud drive. No focus group files or completed surveys were left behind in Tonga.

Audio and video recordings were made during the focus group. Transcription were completed as soon as possible after each focus group has been held. Resultant data were entered into NVIVO 12PRO. Teacher surveys were completed anonymously online using Qualtrics. Parent surveys were completed on paper and returned to the school. Each survey was scanned to create an electronic version. All hard copies were then shredded and discarded. The electronic files were uploaded to a secure cloud storage and no electronic files were left in Tonga. The parent survey data were then entered by the researcher into Qualtrics. All Qualtrics data were then exported to SPSS for analysis.

Names of individuals and places and other identifiable features were changed so participants are not identifiable. Audio and transcribed versions of the original focus groups will be kept in multiple password protected locations including cloud storage, external hard-drive at workplace, and external hard-drive at home. Coding of the data went through several iterations using deductive and inductive methods looking for themes and relationships as open and axial coding was conducted.

Data Analysis

The research questions were investigated on face value and in more depth by considering each against demographic data using various methods of analysis. Census (Groves et al., 2009) and representative sampling (Urdan, 2016) were used to gather data for survey and focus groups respectively. Quantitative data were entered into SPSS which is a statistical software program that enabled the researcher to conduct descriptive analysis of the data as well as factor analysis, reliability tests, t-tests, ANOVAs and regressions (Urdan, 2016; Weinberg & Abramowitz, 2015). NVIVO 12Pro was used to analyze the quantitative data derived from the focus groups and several open-ended questions that were included at the end of each survey. This quantitative data went through open and axial coding (Merriam & Tisdell, 2015) referred to by some as first and second cycle coding (Miles et al., 2014) to identify themes that could support or refute the findings of the quantitative data. The results of the analysis are presented below.

Quantitative Analysis

Reliability and Factor Analysis

An important consideration for the current research was to determine the reliability and validity (Groves et al., 2009) of the instruments that were used. The original instruments were used in the North American context and whereas the current research took place in Tonga it was

important to determine the reliability scores for each section of the surveys and compare them
against those obtained by the original authors of the surveys.

Parent Survey Data

Reliability tests in the current study supported the decision to use the instruments with
high alpha scores that were comparable to the original scores reported by Walker et al. (2005)
and the comparison with reliability scores of the current research. In preparing the parent surveys
the researcher consulted with the Principals and counselors at each school. It was determined that
the questions were appropriate as written but that parents generally had insufficient English
capability to understand each question and complete the survey accurately. A professional
translator was engaged to translate the parent survey into Tongan and the translation was
reviewed and verified by the school principals and counselors.

It was important to further test whether the items in each section all loaded on a single
item or whether additional factors could be identified. Factor analysis of the parent survey data
suggested that certain scale items loaded onto additional factors and reliability remained
comparable to original alpha scores (Table B4). Scale items in section B loaded onto two
separate factors, items in section A-1 and A-2 loaded on just one factor each but with less items.
All other section (C-1 to G-2) remained unchanged with factor analysis indicating that all items
in their respective section loaded onto a single factor in each. All reliability scores remained
comparable to the original Hoover-Dempsey and Sandler (2005) score.

Teacher Survey Data

Similar results were obtained when investigating the reliability of the teacher survey data.
Alpha scores of the current research were comparable to the original scores (Hoover-Dempsey et
al., 2002) as shown in Table B5. In preparing the teacher surveys the researcher consulted with
the Principals and counselors at each school. It was determined that the questions were

appropriate as written and that all the teachers had sufficient English capability to understand each question and complete the survey accurately.

      Factor analysis suggested that certain scale items loaded onto additional factors for both the teacher and parent surveys and reliability remained comparable to original alpha scores (Table B5). Factor and reliability analysis of the teacher survey (Table B5) indicated that items in section A loaded on three separate factors, items in section B to E all loaded onto a single factor each but with fewer scale items in each factor, and items in section F loaded onto two factors. In each instance Cronbach's alpha reliability scores remained comparable to the original Hoover-Dempsey et al. (2002) score.

Table B4

Parent Survey Factor Analysis and Reliability Scores

Original item*	Factor analysis and alpha scores of current research
Section A – ROLE CONSTRUCTION	
Part 1: Role Activity Beliefs (alpha = .80)	Factor A-1 Role activity Beliefs (alpha = .82, items – 1, 2, 4, 5, 7, 8, 9, 10)
Part 2: Valence to School (alpha = .85)	Factor A-2 Valence to School (alpha = .795, items – 1, 2, 3, 5)
Section B: SELF EFFICACY Helping My Child Learn (alpha = .78)	Factor B-1 SE – Lack confidence about my ability (alpha = .88, items – 2. 3. 5. 6)
	Factor B-2 SE – Confident about my ability (alpha = .62, items – 1, 4, 7)
INVITATIONS	
Section C: Parental Perceptions of General Invitations for Involvement from the School (alpha = .83)	Factor C-1 Parental Perceptions of General Invitations for Involvement from the School (alpha = .79, all 6 items)
Section D: Parental Perceptions of Specific Child Invitations to Involvement (alpha = .81)	Factor D-1 Parental Perceptions of Specific Child Invitations to Involvement (alpha = .85, all 6 items)
Section E: Parental Perceptions of Specific Teacher or School Invitations to Involvement (alpha = .81)	Factor E-1 Parental Perceptions of Specific Teacher or School Invitations to Involvement (alpha = .88, all 6 items)
LIFE CONTEXT	
Section F-1: Parental Perceptions of Personal Time and Energy for Involvement Activities (alpha = .84)	Factor F-1 Parental Perceptions of Personal Time and Energy for Involvement Activities (alpha = .83, all 6 items)
Section F-2: Parental Perceptions of Personal Knowledge and Skills for Involvement (alpha = .83)	Factor F-2 Parental Perceptions of Personal Knowledge and Skills for Involvement (alpha = .91, All 9 items)
INVOLVEMENT FORMS	
Section G-1: Parent Choice of home-based Involvement forms (alpha = .85)	Factor G-1 Parent Choice of home-based Involvement forms (alpha = .84, all 5 items)
Section G-2: Parent Choice of school-based Involvement forms (alpha = .82)	Factor G-2 Parent Choice of school-based Involvement forms (alpha = .85, all 5 items)

*Original factor and alpha reliability as reported by Walker et al. (2005)

These item loadings were used to create new factors which formed the basis of the following analysis including t-tests, ANOVAs, and regressions to look at the relationships between factors and the influence and relationship of demographic information.

Table B5

Teacher Survey Factor Analysis and Reliability Scores

Original item*	Factor analysis and alpha scores of current research
Section A: Teacher Self-Efficacy for Teaching (alpha = .81)	Factor 2.1 - External Factors Have Greater Impact (alpha = .84, 3 items – 10, 11, 12)
	Factor 2.2 - Uncertainty and Insecurity About One's Own Ability (alpha = .696, 3 items – 3, 8, 9)
	Factor 2.3 - Confident About One's Own Ability (alpha = .66, 4 items – 1, 2, 4, 7)
Section B: Beliefs About Parent Involvement (alpha = .65)	Factor 3.1 - Beliefs About Parent Involvement - Parents know how to help (alpha = .63, 3 items – 3, 4, 5)
Section C: Parent Efficacy for Helping Children Succeed in School (alpha = .80)	Factor 4.1 - Parent Efficacy - What Parents Do Actually Helps Students (alpha = .797, 3 items – 1,6, 7)
Section D: Importance of Specific Involvement Practices (alpha = .90)	Factor 5.1 - Importance of Specific Involvement Practices (alpha = .87, 7 items – 4-6, 13-16)
Section E: Percentage of Parents' Involvement (alpha = .89)	Factor 6.1 - Percentage of Parents' Involvement (alpha = .98, 12 items – 3 to 14)
Section F: Invitations for Parental Involvement (alpha = .89)	Factor 7.1 - Invitations for Parental Involvement - Making Suggestions to Parents (alpha = .93, 9 items 6, 8-14)
	Factor 7.2 - Invitations for Parental Involvement - Making Contact with Parents (alpha = .84, 4 items 1-3, 16)

* Original factor and alpha reliability as reported by Hoover-Dempsey et al. (2002)

T-Tests and ANOVAs

It was important to approach data with a plan to help understand the relationships they represent in a way that is meaningful and accurate. Finding ways to understand how responses are influenced by demographic attributes of participants or how factors interreact with each other inevitably requires understanding whether the responses are significantly different from each other and can best be accomplished by taking into consideration the mean scores of participants and testing them against each other in various ways. T-tests and ANOVAs were used as a preliminary investigation into the data obtained from surveys given to teachers and parents.

According to Urdan (2016) "The common-use definition or description of t tests is simply comparing two means to see if they are significantly different from each other" (location 2683, Kindle Edition) while "the purpose of a one-way analysis of variance (one-way ANOVA) is to compare the means of two or more groups (the independent variable) on one dependent variable to see if the group means are significantly different from each other" (location 3191, Kindle Edition). Independent t-tests were used to compare means of bivariate attributes of participants (e.g sex – male and female) while ANOVA tests were used to compare means of participants for multi-variate attributes (e.g participants level of education – primary, high school, university). Statistical significance was based on alpha level less than .05 but additional tests were conducted to determine the effect size of the relationships between the means to establish practical significance.

When conducting ANOVAs post hoc tests were conducted to determine the nature of the interactions between the multi-variate attributes being used to compare the means. Levene's statistic, sample size and other measures were used to determine the most appropriate post-hoc test to use which in most cases was either the Games-Howell or the Hochberg's comparison of groups.

Simple Regression and Multiple-Linear Regression

Both simple and multiple regression analysis were used to analyze the data. While simple regression focusses on understanding a dependent variable based on one predictor or independent variable, multiple regression incorporates two or more predictor or independent variables (Urdan, 2016). Regression analysis helps us understand the degree of variance explained in responses due to the relationship between the variable under consideration.

Assumptions of multiple regression were investigated each time a new relationship was considered. Analysis of standard residuals showed that the data contained no outliers (Std.

Residual Min > -3.29, Std. Residual Max < 3.29) for the teacher data but for some tests of the

parent data this meant removing several outliers in the data set. Multicollinearity was not a

concern for any of the variables (Tolerance > .01, VIF <10). The data met the assumption of

independent errors (Durbin-Watson value close to 2). The histogram of standardized residuals

indicated that the data contained approximately normally distributed errors, as did the normal P-

P plot of standardized residuals, which showed points that were not exactly on the line, but close.

The scatterplot of standardized residuals showed that the data met the assumptions of

homogeneity of variance and linearity. The data also met the assumption of non-zero variances

with the variances of all factors and variables above zero.

Qualitative Analysis

Focus group data were analyzed looking for themes and patterns in participant responses

most particularly associated with research questions one and two which attempt to describe the

types and frequency of parent involvement in Tonga and the relationship motivating factors that

influence the types of parent involvement reported. Because of the tight window of opportunity

to conduct the focus groups, transcription of the interviews occurred after all sessions had been

conducted. All seven sessions occurred over a three-day period at four different schools. After

each session the researcher reflected on the experience and recorded additional notes in a

research journal including initial thoughts about how each group responded to the questions.

Video and audio recordings were used in the transcription process and proved invaluable in

reviewing the content. All transcriptions were uploaded into NVIVO 12PRO for analysis.

The surveys also had three open ended questions asking respondents about the influence

of culture, language and religion on parent involvement. Teachers responded in English, but

parent responses were in Tongan. A professional translator was employed to translate the parent

responses. All survey open ended responses were also uploaded into NVIVO 12PRO for analysis.

All transcriptions and survey responses were identified with demographic detail about the school and sex of the participant giving the response with the survey questions also having the additional survey demographics added to each case. Once the responses and transcriptions were entered, an auto coding process was used to code responses according to the question that was asked that generated the response. This provided a simple grouping for initial review.

Open Coding

Etic and emic processes were then employed to establish the coding structure. Initially, the researcher drew from the literature and from the design of the focus group and associated survey to create classification categories (Nodes in NVIVO) for organizing and describing the data (Patton, 2002). The responses were read very quickly to glean additional categories that seemed to arise in the data and added to the list. This process resulted in a codebook intended to identify and define each code.

This coding framework was introduced to a cohort of doctoral students who then participated in an open-coding process (Merriam & Tisdell, 2015) of the data, also referred to as first cycle coding (Miles et al., 2014) using the codebook intended to assign phrases or sentences to codes. Each member was assigned a questions or transcription and began coding the data, categorizing it according to the structure provided by the researcher. Several members worked on the same data set and held a series of meetings to collaborate and to calibrate their approach to coding. All team members met together several times to combine coding efforts calibrate the coding and redistribute the file for continued coding. Emic coding took place as team members indented aspects of the responses that were not originally found in the etic structure.

Axial Coding

With the data grouped together by numerous categories the analysis of the qualitative data turned to axial coding (Patton, 2002), sometimes referred to as second cycle coding (Miles et al., 2014) to consider how this data fit together. Some of the questions asked during focus groups helped in this process as responses aligned again with them but some of the nuances found during open coding were able to help determine more depth in the responses. For example, open coding identified phrases that relate generally to culture, others that relate to respect, and some that relate to positive or negative feelings. Bringing those together we may find a theme that participants felt that respect was a positive or negative aspect of culture.

While a rigorous approach was taken in gathering and analyzing the qualitative data this does not constitute the primary foundation of the results reported in this research. The main emphasis is on the quantitative data with additional insight provided the qualitative data to support or question the findings of the survey data. Ongoing analysis of the qualitative data are intended to provide the foundation of future reports and articles in an evolving dissection of the data.

A Final Word

In the pragmatist view, researchers focus on the problem and incorporate all available approaches to understand it (Creswell, 2009). The nature of the research questions suggests that employing both qualitative and quantitative methods could elicit the desired information. Thus, to obtain a detailed, comprehensive view of family engagement a pragmatist (Cherryholmes, 1992; Murphy, 1990; Patton, 2002), mixed methods approach was chosen.

Qualitative focus groups allowed the researcher to learn how parents and teachers defined and experienced PI without imposing terminology or models upon them. This gave an authentic voice to the data and humanized the results. The Tongan perspective was captured, loosely

framed within the context of the theoretical framework but allowing participants to use their own language and words to express their understanding and experience of the construct without being limited to the narrow conversation and terminology of the surveys.

A positivist, quantitative approach (Creswell, 2009; Phillips & Burbules, 2000) justified the use of existing surveys which enabled the researcher to stay aligned with the primary theoretical framework and gather data across many factors. Data analysis began with exploratory factor analysis and reliability testing to create explanatory and outcome variables, and to establish confidence in the collected data and instruments used.

APPENDIX C

Approvals

Approval from Seminaries and Institutes

THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

SEMINARIES AND INSTITUTES OF RELIGION

50 E North Temple
Salt Lake City, UT 84150

April 9, 2019

Institutional Review Board for Human Subjects
Brigham Young University
A-285 ASB Campus Drive
Provo, UT 84602

Institutional Review Board for Human Subjects,

Matthew Pope has the permission of Seminaries & Institutes of Religion and Church Schools to recruit subjects and/or conduct research for his study entitled: *The perception of parents and teachers in Tonga about parent involvement in education and the motivating factors that influenced their involvement decisions.* The details of this study have been explained to us and we support the research.

Please contact me for any further questions at BigelowRo@churchofjesuschrist.org or 801-240-3480 .

Sincerely,

Rory C. Bigelow
Associate Administrator
Seminaries & Institutes of Religion and Church Schools

50 East North Temple Street • Salt Lake City, Utah 84150-0009 • Phone: 1-801-240-3480

IRB Approval for Original Study

Memorandum

To: Vance Randall
Department:
From: Sandee Aina, MPA, IRB Administrator
Bob Ridge, PhD, IRB Chair
Date: October 18, 2019
IRB#: IRB2019-312
Title: The perception of parents/guardians and teachers in Tonga about parent involvement in education

Brigham Young University's IRB has approved the research study referenced in the subject heading as exempt level

- Category 1: Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
- Category 2: Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
  - i. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;
  - ii. Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

This category does not require an annual continuing review. Each year near the anniversary of the approval date, you will receive an email reminding you of your obligations as a researcher and to check on the status of the study. You will receive this email each year until you close the study.

The study is approved as of 10/18/2019. Please reference your assigned IRB identification number in any correspondence with the IRB.

Continued approval is conditional upon your compliance with the following requirements:

1. The approved, stamped copy of the informed consent statement is available in iRIS on the forms page of protcol record. No other consent statement should be used. Each research subject must be provided with a copy or a way to access the consent statement.
2. Any modifications to the approved protocol must be submitted, reviewed, and approved by the IRB before modifications are incorporated in the study.
3. All recruiting tools must be submitted and approved by the IRB prior to use.
4. In addition, serious adverse events must be reported to the IRB immediately, with a written report by the PI within 24 hours of the PI's becoming aware of the event. Serious adverse events are (1) death of a research participant; or (2) serious injury to a research participant.
5. All other non-serious unanticipated problems should be reported to the IRB within 2 weeks of the first awareness of the problem by the PI. Prompt reporting is important, as unanticipated problems often require some modification of study procedures, protocols, and/or informed consent processes. Such modifications require the review and approval of the IRB. Please refer to the IRB website for more information.

Sandee M.P. Aina, MPA
Human Research Protections Program, Manager
Brigham Young University
A-285 ASB Campus Drive
Provo, UT 84602

IRB Approval of Amendment to Include Focus Groups

<u>**Memorandum**</u>

To: Vance Randall
Department:
From: Sandee Aina, MPA, HRPP Manager
      Bob Ridge, PhD, IRB Chair
Date: November 09, 2019
IRB#: IRB2019-312
Title: The perception of parents/guardians and teachers in Tonga about parent involvement in education

 Brigham Young University's IRB has reviewed the amendment in association with the study referenced above. The IRB determined that the amendment to add a teacher focus group and a parent focus group does not increase risks to the research subjects. It has also been determined that the aims of the study remain as originally approved. The amendment has been approved. The revised consent statements and recruiting script have been approved and stamped for your files. For instructions to access these documents please see the iRIS guide, http://orca.byu.edu/irb/iRIS/story_html5.html, section 5.

The approval of this protocol expires on 11/08/2020. All conditions for continued approval period remain in effect. Any modifications to the approved protocol must be submitted, reviewed and approved by the IRB before modifications are incorporated in the study.

DISSERTATION REFERENCES

Adams, E. A. (2016). *Redefining Family engagement for immigrant Latino families* (Publication

No. 10132165) [Doctoral Dissertation, California Lutheran University]. ProQuest

Dissertations Publishing.

Adelman, H. S., & Taylor, L. (Eds.). (2010). M*ental health in schools: Engaging learners,*

preventing problems, and improving schools. Corwin Press.

Ahlburg, D. A. (1996). Remittances and the income distribution in Tonga. *Population Research*

and Policy Review, 15(4), 391-400.

Amosa, D. U. (2007). The public sector reform in Tonga: The show must go on. *Pacific*

Economic Bulletin, 22(3), 183-190.

Anderson, K. J. (2005). *Understanding parents' decisions to become involved in their children's*

education (Publication No. 3181878) [Doctoral Dissertation, University of Delaware].

ProQuest Dissertations Publishing.

Anderson, K. J., & Minke, K. M. (2007). Parent involvement in education: Toward an

understanding of parents' decision making. *The Journal of Educational Research, 100*(5),

311-323.

Auerbach, S. (2009). Walking the walk: Portraits in leadership for family engagement in urban

schools. *The School Community Journal, 19*(1), 9-32.

Australian Research Alliance for Children and Youth. (2015). *Progressing parental engagement*

in the ACT. Our evidence base. Measuring Parental Engagement. Canberra, ACT

Bakker, J. T. A., & Denessen, E. J. P. G. (2007). The concept of parent involvement: Some

theoretical and empirical considerations. *International Journal About Parents in*

Education, 1(0), 188-199.

Baumrind, D. (1968). Authoritarian vs. authoritative parental control. *Adolescence, 3*(11), 255-272.

Baumrind, D. (1971). Current patterns of parental authority. Developmental psychology, 4(1, Pt.2), 1-103. https://doi.org/10.1037/h0030372

Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth & Society, 9*(3), 239-267.

Baumrind, D. (1991a). Effective parenting during the early adolescent transition. In P. A. Cowan, & M. Hetherington (Eds.), *Family transitions vol. 2* (pp.111-143). Lawrence Erlbaum Associates, Inc.

Baumrind, D. (1991b). The influence of parenting style on adolescent competence and substance use. *The Journal of Early Adolescence, 11*(1), 56-95.

Becker, L. (2009). *Parenting behavior frequency related to children's math and English language achievement* (Publication No. AAI3382310) [Doctoral Dissertation, Pace University]. https://digitalcommons.pace.edu/dissertations/AAI3382310

Biddle, B. J. (1986). Recent developments in role theory. *Annual Review of Sociology*, *12*(1), 67-92.

Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001). *Focus groups in social research*. Sage Publications Ltd.

Brown, R. P., & Jimenez, E. (2008). Estimating the net effects of migration and remittances on poverty and inequality: Comparison of Fiji and Tonga. *Journal of International Development, 20*(4), 547-571. DOI: 10.1002/jid.1474

Burley, D., Edinborough, K., Weisler, M., & Zhao, J.X. (2015). Bayesian modeling and chronological precision for Polynesian settlement of Tonga. *PLoS One, 10*(3), e0120795.

Burley, D. V., Nelson, D. E., & Shutler Jr, R. (1999). A radiocarbon chronology for the Eastern Lapita frontier in Tonga. *Archaeology in Oceania, 34*(2), 59-70.

Cardno, C., & Howse, J. (2005). The role and management development needs of secondary principals in Tonga and the Fiji islands. *International Studies in Educational Administration, 33*(3), 34-44.

Catherwood, V., Taufa, T. U., Scott, C., & Cook, B. (2003). *Tonga - Education sector study*. New Zealand Agency for International Development and the Government of Tonga. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.456.9067&rep=rep1&type=pdf

Chen, W. P., & Brudzinski, M. R. (2003). Seismic anisotropy in the mantle transition zone beneath Fiji-Tonga. *Geophysical Research Letters, 30*(13), 1-4. DOI: 10.1029/2002GL016330

Cherryholmes, C. H. (1992). Notes on pragmatism and scientific realism. *Educational Researcher, 21*(6), 13-17.

Chowa, G. A. N., Masa, R. D., & Tucker, J. (2013). The effects of parental involvement on academic performance of Ghanaian youth: Testing measurement and relationships using structural equation modeling. *Children and Youth Services Review, 35*(12), 2020-2030. DOI: 10.1016/j.childyouth.2013.09.009

Cohen, L., Manion, L., & Morrison, K. (2013). *Research methods in education.* Routledge.

Coldwell, M., Stephenson, K., Fathallah-Caillau, I., & Coldron, J. (2003). *Evaluation of home-school agreements. Research report RR455*. Sheffield Hallam University, Department for Education and Skills.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches.* Sage Publications.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process.* Sage Publications.

Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin, 113*(3), 487-496.

De Paor, D. G., Wild, S. C., & Dordevic, M. M. (2012). Emergent and animated COLLADA models of the Tonga Trench and Samoa Archipelago: Implications for geoscience modeling, education, and research. *Geosphere, 8*(2), 491-506.

Desimone, L. (1999). Linking parent involvement with student achievement: Do race and income matter? *The Journal of Educational Research, 93*(1), 11-30.

Dumont, H., Trautwein, U., Nagy, G., & Nagengast, B. (2014). Quality of parental homework involvement: Predictors and reciprocal relations with academic functioning in the reading domain. *Journal of Educational Psychology, 106*(1), 144-161.

Ellison, J. C. (1989). Pollen analysis of mangrove sediments as a sea-level indicator: Assessment from Tongatapu, Tonga. *Palaeogeography, Palaeoclimatology, Palaeoecology, 74*(3-4), 327-341.

Emerson, L., Fear, J., Fox, S., & Sanders, E. (2014). *Parental engagement in learning and schooling: Lessons from research*. Australian Research Alliance for Children and Youth (ARACY) for the Family–School and Community Partnerships Bureau.

Epstein, J. L. (1983). *Effects on parents of teacher practices of parent involvement (Report No. 346).* National Inst. of Education. MD: https://files.eric.ed.gov/fulltext/ED237500.pdf

Epstein, J. L. (1984a). *Effects of teacher practices of parent involvement change in student achievement in reading and math*. Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 23-27, 1984)

Epstein, J. L. (1984b). School policy and parent involvement: Research results. *Educational Horizons, 62*(2), 70-72.

Epstein, J. L. (1988). How do we improve programs for parent involvement? *Educational Horizons*, *66*(2), 58-59.

Epstein, J. L. (1995). School/family/community partnerships. *Phi Delta Kappan, 76*(9), 701-712.

Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and improving schools* (Kindle edition, Second ed.). Routlege.

Epstein, J. L., & Dauber, S. L. (1991). School programs and teacher practices of parent involvement in inner-city elementary and middle schools. *The Elementary School Journal, 91*(3), 289-305.

Epstein, J. L., & Jansorn, N. R. (2004). School, family and community partnerships link the plan. *The Education Digest, 69*(6), 19-23.

Epstein, J. L., & Salinas, K. C. (2004). Partnering with families and communities. *Educational Leadership, 61*(8), 12-19.

Epstein, J. L., & Sanders, M. G. (2002). Family, school, and community partnerships. In M. H. Bornstein (Ed.) *Handbook of parenting: Vol. 5. Practical issues in parenting*. (pp. 407-437). Lawrence Erlbaum Associates, Inc.

Epstein, J. L., & Van Voorhis, F. L. (2001). More than minutes: Teachers' roles in designing homework. *Educational Psychologist, 36*(3), 181-193.

Ercikan, K., & Roth, W.-M. (2006). What good is polarizing research into qualitative and quantitative? *Educational Researcher, 35*(5), 14-23.

Ewer, R. A., Giles, D. T., Godfrey, A., Godfrey, K., Griffiths, C. P., & Hall, R. L. (Eds.). (2015). *By study and also by faith: One hundred years of Seminaries and Institutes of Religion*. The Church of Jesus Christ of Latter-day Saints.

Fa'avae, D. (2016). *Tatala ʻae Koloa ʻoe To'utangata Tonga i Aotearoa mo Tonga: The intergenerational educational experiences of Tongan males in New Zealand and Tonga* (Identifier http://hdl.handle.net/2292/32183) [Doctoral dissertation, University of Auckland]. University of Auckland Library and Learning Services

Fajoju, S. A., Aluede, O., & Ojugo, A. I. (2016). Parental involvement as a correlate of academic achievement of primary school pupils in Edo State, Nigeria. *Research in Education, 95*(1), 33-43.

Fall, P. L. (2005). Vegetation change in the coastal-lowland rainforest at Avai'o'vuna Swamp, Vava'u, Kingdom of Tonga. *Quaternary Research, 64*(3), 451-459.

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1-22.

Ferguson, C. (2008). *The school-family connection: looking at the larger picture. A review of current literature*. National Center for Family and Community Connections with Schools.

Foliaki, S., Best, D., Akau'ola, S., Cheng, S., Borman, B., & Pearce, N. (2011). Cancer incidence in four pacific countries: Tonga, Fiji Islands, Cook Islands and Niue. *Pac Health Dialog, 17*(1), 21-32.

Fonua, A. K. B. (2014). *ICT, Tertiary level learners and sustainable development in Tonga*. [Unpublished Masters Capstone Research]. Monash University.

Forte, G. C. (1993). Parental relationships with public schools in Tonga: A hermeneutic study with implications for California educators (Publication No. 9332239) [Doctoral dissertation, University of San Francisco]. ProQuest Dissertations Publishing

Fotu, K. F., Moodie, M. M., Mavoa, H. M., Pomana, S., Schultz, J. T., & Swinburn, B. A. (2011). Process evaluation of a community-based adolescent obesity prevention project in Tonga. *BMC Public Health, 11*, 284 (2011). https://doi.org/10.1186/1471-2458-11-284

Georgiou, S. N. (1996). Parental involvement: Definition and outcomes. *Social Psychology of Education, 1*(3), 189-209.

Goodall, J., & Vorhaus, J. (2011). Review of best practice in parental engagement (Report No. RR156). UK Department for Education. https://www.researchgate.net/profile/Janet_Goodall/publication/265673055_Review_of_best_practice_in_parental_engagement/links/54abffff0cf2ce2df6692e19/Review-of-best-practice-in-parental-engagement.pdf

Green, C. L., Walker, J. M., Hoover-Dempsey, K. V., & Sandler, H. M. (2007). Parents' motivations for involvement in children's education: An empirical test of a theoretical model of parental involvement. *Journal of Educational Psychology, 99*(3), 532-544.

Griffith, J. (2001). Principal leadership of parent involvement. *Journal of Educational Administration, 39*(2), 162-186.

Grolnick, W. S., Benjet, C., Kurowski, C. O., & Apostoleris, N. H. (1997). Predictors of parent involvement in children's schooling. *Journal of Educational Psychology, 89*(3), 538-548.

Grolnick, W. S., & Slowiaczek, M. L. (1994). Parents' involvement in children's schooling: A multidimensional conceptualization and motivational model. *Child Development, 65*(1), 237-252.

Groves, R. M., Fowler Jr, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology* (2nd ed.). John Wiley & Sons.

Guest, G., Namey, E. E., & Mitchell, M. L. (2013). *Collecting qualitative data: A field manual for applied research*. Sage Publications.

Harris, A. L., & Robinson, K. (2016). A new framework for understanding parental involvement: Setting the stage for academic success. *RSF: The Russell Sage Foundation Journal of the Social Sciences, 2*(5), 186-201.

Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement: Annual synthesis, 2002.* National Center for Family & Community Connections with Schools, Southwest Educational Development Laboratory.

Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology, 45*(3), 740-763.

Hoglund, W. L., Jones, S. M., Brown, J. L., & Aber, J. L. (2015). The evocative influence of child academic and social-emotional adjustment on parent involvement in inner-city schools. *Journal of Educational Psychology, 107*(2), 517-532.

Hoover-Dempsey, K. V., Bassler, O. C., & Brissie, J. S. (1987). Parent involvement: Contributions of teacher efficacy, school socioeconomic status, and other school characteristics. *American Educational Research Journal, 24*(3), 417-435.

Hoover-Dempsey, K. V., Bassler, O. C., & Brissie, J. S. (1992). Explorations in parent-school relations. *Journal of Educational Research*, *85*(5), 287-294.

Hoover-Dempsey, K. V., & Jones, K. P. (1997). Parental role construction and parental involvement in children's education. *Presented at the Annual Meeting of the American Education Research Association*. https://files.eric.ed.gov/fulltext/ED411054.pdf

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., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research, 67*(1), 3-42.

Hoover-Dempsey, K. V., & Sandler, H. M. (2005). *The social context of parental involvement: A path to enhanced achievement (Grant No. R305T010673).* Open Educational Resource Initiative (OERI). http:// www.vanderbilt.edu/Peabody/family-school/Reports.htm

Hoover-Dempsey, K. V, Sandler, H. M., Whitaker, M., & Orlowski, C. (2003). *Permission to use instruments statement.* The Family-School Partnership Lab. http://web.archive.org/web/20141011164600/http://www.vanderbilt.edu/peabody/family-school/scale_descriptions/use_statement.html

Hoover-Dempsey, K. V., Walker, J. M., Jones, K. P., & Reed, R. P. (2002). Teachers involving parents (TIP): Results of an in-service teacher education program for enhancing parental involvement. *Teaching and Teacher Education, 18*(7), 843-867.

Hoover-Dempsey, K. V., Walker, J. M., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., & Closson, K. (2005). Why do parents become involved? Research findings and implications. *The Elementary School Journal, 106*(2), 105-130.

Horan, J. C. (2002). Indigenous wealth and development: Micro–credit schemes in Tonga. *Asia Pacific Viewpoint, 43*(2), 205-221.

Hunter, D. J., Howes, D., & McCallum, J. (2019). Defining Exploratory-Descriptive Qualitative (EDQ) research and considering its application to healthcare. *GSTF Journal of Nursing and Health Care, 4*(1). DOI: 10.5176/2345-7198_4.1.202

Inoa, R. (2017). Parental involvement among middle-income Latino parents living in a middle-class community. *Hispanic Journal of Behavioral Sciences, 39*(3), 316-335.

Ishimaru, A. M. (2017). From family engagement to equitable collaboration. *Educational Policy, 33*(2), 350-385.

Jeynes, W. H. (2005a). A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education, 40*(3), 237-269.

Jeynes, W. H. (2005b). Effects of parental involvement and family structure on the academic achievement of adolescents. *Marriage & Family Review, 37*(3), 99-116.

Jeynes, W. H. (2010). *Parental involvement and academic success.* Routledge.

Jeynes, W. H. (2018). A practical model for school leaders to encourage parental involvement and parental engagement. *School Leadership & Management, 38*(2), 147-163.

Katenkamp, A. M. (2008). The relation between parents' involvement beliefs and behaviors and teachers' perceptions of parents' beliefs and behaviors (Publication No. 304177522) [Doctoral Dissertation, University of Maryland]. ProQuest Dissertations and Theses Global.

Kim, S. W. (2020). Meta-analysis of parental involvement and achievement in East Asian countries. *Education and Urban Society, 52*(2), 312-337.

Kirk, S. F., Cockbain, A. J., & Beazley, J. (2008). Obesity in Tonga: A cross-sectional comparative study of perceptions of body size and beliefs about obesity in lay people and nurses. *Obesity Research & Clinical Practice, 2*(1), 35-41.

Korn, S. R. D. (1978). From the archives: Hunting the ramage: Kinship and the organization of political authority in aboriginal Tonga. *The Journal of Pacific History, 13*(2), 107-113.

Kramer, K. Z. (2012). Parental behavioural control and academic achievement: Striking the balance between control and involvement. *Research in Education, 88*(1), 85-98.

Krueger, R. A., & Casey, M. A. (2014). *Focus groups: A practical guide for applied research.* Sage Publications.

Latu, L. V. L. (2018). Family structure and academic performance of students in secondary schools in the Kingdom of Tonga. (Publication No. 15100) [Master's Thesis, University of Canterbury]. University of Canterbury Research Repository. http://hdl.handle.net/10092/15100

Lavenda, O. (2011). Parental involvement in school: A test of Hoover-Dempsey and Sandler's model among Jewish and Arab parents in Israel. *Children and Youth Services Review, 33*(6), 927-935.

Lunenburg, F. C., & Irby, B. J. (2002). *Parent involvement: A key to student achievement* [Conference session]. Annual Meeting of the National Council of Professors of Educational Administration. Burlington, Vermont.

MacIntyre, L. I. K. (2008). *Tongan mothers' contributions to their young children's education in New Zealand.* (Publication No. 1398) [Doctoral thesis, Massey University]. http://hdl.handle.net/10179/1398

Mapp, K. L. (2000). *Making the connection between families and schools: Why and how parents are involved in their children's education* (Publication No. 9933144) [Doctoral Dissertation, Harvard University]. ProQuest Dissertations and Theses Global

Mapp, K. L., Alberty, M., & Bergman, E. (2019). The Dual Capacity-Building Framework for Family-School Partnerships (version 2). Retrieved from https://www.dualcapacity.org/

Mapp, K. L., Johnson, V. R., Strickland, C. S., & Meza, C. (2008). High school family centers: Transformative spaces linking schools and families in support of student learning. *Marriage & Family Review, 43*(3-4), 338-368.

Matoto, V., Viney, K., Roseveare, C., Colaguiri, R., & Marais, B. (2014). Burden and spectrum of disease in people with diabetes in Tonga. *Public Health Action, 4*(1), S44-S49. DOI: https://doi.org/10.5588/pha.13.0080

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation.* John Wiley & Sons.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook. 3rd. ed*. Sage Publications.

Moore, D. S., & McCabe, G. P., (1989). *Introduction to the Practice of Statistics*. W. H. Freeman.

Morsbach, S. K., & Prinz, R. J. (2006). Understanding and improving the validity of self-report of parenting. *Clinical Child and Family Psychology Review, 9*(1), 1-21.

Mowder, B. A. (2005). The Parent Development Theory: Understanding parents, parenting perceptions, and parenting behaviors. *Early Childhood and Infant Psychology, 1*, 45-64.

Murphy, J. P. (1990). Pragmatism: from Peirce to Davidson. *Transactions of the Charles S. Peirce Society, 28*(2), 321-333.

Naidu, S., & Chand, A. (2012). A comparative study of the financial problems faced by micro, small and medium enterprises in the manufacturing sector of Fiji and Tonga. *International Journal of Emerging Markets, 7*(3), 245-262.

Newchurch, A. (2017). The Impact of parent involvement on student success: school and family partnerships from the perspective of parents and teachers. [Doctoral Dissertation, Kennesaw State University]. Kennesaw State University Digital Commons https://digitalcommons.kennesaw.edu/teachleaddoc_etd/21

Newman, I., & Benz, C. R. (1998). *Qualitative-quantitative research methodology: Exploring the interactive continuum*. Southern Illinois University Press.

No Child Left Behind Act of 2001, P.L. 107-110, 1425 C.F.R. § § 6319 (2002).

Nye, C., Turner, H., Schwartz, J., & Nye, C. (2006). Approaches to parent involvement for improving the academic performance of elementary school age children. *Campbell Systematic Reviews, 2*(1), 1-49. DOI: 10.4073/ csr.2006.4

Okagaki, L., & Frensch, P. A. (1998). Parenting and children's school achievement: A multiethnic perspective. *American Educational Research Journal, 35*(1), 123-144.

Orams, M. B. (2001). From whale hunting to whale watching in Tonga: A sustainable future? *Journal of Sustainable Tourism, 9*(2), 128-146.

Patton, M. Q. (2002). Qualitative research and evaluation methods (3rd ed.). Sage Publications.

Pena, D. C. (2000). Parent involvement: Influencing factors and implications. *The Journal of Educational Research, 94*(1), 42-54

Pengpid, S., & Peltzer, K. (2018). Parental involvement, health behaviour and mental health among school-going adolescents in seven Pacific Island countries. *Journal of Human Behavior in the Social Environment*, *28*(8), 1068-1077.

Phillips, D. C., & Burbules, N. C. (2000). *Postpositivism and educational research*. Rowman & Littlefield.

Pinquart, M. (2016). Associations of parenting styles and dimensions with academic achievement in children and adolescents: A meta-analysis. *Educational Psychology Review, 28*(3), 475-493.

Ramirez, A. Y. (2003). Dismay and disappointment: Parental involvement of Latino immigrant parents. *The Urban Review, 35*(2), 93-110.

Redding, S., Langdon, J., Meyer, J., & Sheley, P. (2004). The effects of comprehensive parent engagement on student learning outcomes. *American Educational, 14*(4), 3-7.

Reininger, T., & Santana López, A. (2017). Parental involvement in municipal schools in Chile: Why do parents choose to get involved? *School Psychology International, 38*(4), 363-379.

Reynolds, A. J. (1992). Comparing measures of parental involvement and their effects on academic achievement. *Early Childhood Research Quarterly, 7*(3), 441-462.

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health, 33*(1), 77-84.

Schwarz, N., & Oyserman, D. (2001). Asking questions about behavior: Cognition, communication, and questionnaire construction. *The American Journal of Evaluation, 22*(2), 127-160.

Schwarz, N., Oyserman, D., & Peytcheva, E. (2010). Cognition, communication, and culture: Implications for the survey response process. In Harkness, J. A., Braun, M., Edwards, B., Johnson, T. P., Lyberg, L., Mohler, P. P., Pennell, B.-E., & Smith, T. W. (Eds.). Survey Methods in Multinational, Multiregional and Multicultural Contexts, 177-190, 10. John Wiley and Sons, Inc.. https://doi.org/10.1002/9780470609927

Seefeldt, C., Denton, K., Galper, A., & Younoszai, T. (1998). Former Head Start parents' characteristics, perceptions of school climate, and involvement in their children's education. *The Elementary School Journal, 98*(4), 339-349.

Sheldon, S. B., & Epstein, J. L. (2004). Getting students to school: Using family and community involvement to reduce chronic absenteeism. *School Community Journal*, *14*(2), 39-56.

Skinner, R. (2014). *Understanding and overcoming parental involvement barriers* (Publication No. 3632881) [Doctoral Dissertation, Walden University]. ProQuest Dissertations Publishing. https://search.proquest.com/docview/1608993876?pq-origsite=gscholar&fromopenview=true

Sopu, H., Chisaki, Y., & Usagawa, T. (2016). Use of Facebook by secondary school students at Nuku'alofa as an indicator of e-readiness for e-learning in the Kingdom of Tonga. *The International Review of Research in Open and Distributed Learning, 17*(4), 203-223.

Spera, C. (2005). A review of the relationship among parenting practices, parenting styles, and adolescent school achievement. *Educational Psychology Review, 17*(2), 125-146.

Steinberg, L., & Darling, N. (2017). Parenting style as context: An integrative model. In B. Laursen, & R. Zukauskiene (Eds.), *Interpersonal development* (pp.161-170, 8). Routledge.

Sui-Chu, E. H., & Willms, J. D. (1996). Effects of parental involvement on eighth-grade achievement. *Sociology of Education, 69*(2), 126-141.

Tatafu, M., Booth, E., & Wilson, M. (1997). Secondary school failure in Tonga: Implications for in service and preservice teacher development. *Directions-Journal of Educational Studies, 79*(1), 55-81.

Taufe'ulungaki, A. M. (1979). Curriculum development in Tonga: Then and now. *Directions-Journal of Educational Studies*, 3, 25-35.

Taufe'ulungaki, A. M. (2013). *Annual report of the Ministry of Education and Training*. Office of the Minister for Education and Training.

Taylor, L., & Adelman, H. S. (2000). Connecting schools, families, and communities. *Professional School Counseling, 3*(5), 298-307.

Tekin, A. K. (2016). Parental perceptions of life context variables for involvement in their young children's education. *Education 3-13, 44*(3), 353-366.

Thaman, K. H. (1995). Concepts of learning, knowledge and wisdom in Tonga, and their relevance to modern education. *Prospects, 25*(4), 723-733.

The World Bank (2018). *Learning to realize education's promise*. In World Development Report 2018. The World Bank.

Tonga Ministry of Education and Training. (2019, December 10). Ministry of Education and Training, http://www.edu.gov.to

Urdan, T. C. (2016). *Statistics in plain English* (4th ed.). Routledge.

Van Voorhis, F. L. (2001). Interactive science homework: An experiment in home and school connections. *NAASP Bulletin, 85*(627), 20-32.

Van Voorhis, F. L., Maier, M. F., Epstein, J. L., & Lloyd, C. M. (2013). *The impact of family involvement on the education of children ages 3 to 8: A focus on literacy and math achievement outcomes and social-emotional skills.* MDRC. https://files.eric.ed.gov/fulltext/ED545474.pdf

Waggoner, K., & Griffith, A. (1998). Parent involvement in education: Ideology and experience. *Journal for a Just and Caring Education, 4*(1), 65-77.

Walker, J. M., 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), 85-104.

Walshaw, M., & Anthony, G. (2008). The teacher's role in classroom discourse: A review of recent research into mathematics classrooms. *Review of Educational Research, 78*(3), 516-551.

Weinberg, S. L., & Abramowitz, S. K. (2015). *Statistics using SPSS: An integrative approach* [Kindle Edition]. Cambridge University Press.

Weiss, H. B., Lopez, M. E., & Rosenberg, H. (2010). Beyond random acts: Family, school, and community engagement as an integral part of education reform. National Policy Forum for Family, School, & Community Engagement. Harvard Family Research Project. https://eric.ed.gov/?id=ED517978