TEACHERS' AND ADMINISTRATORS' PERSPECTIVES

OF VIRTUAL PROFESSIONAL DEVELOPMENT

ON ENGLISH ACQUISITION FOR NATIVE SPANISH-SPEAKING STUDENTS IN

GRADES KINDERGARTEN THROUGH THIRD GRADE:

STORIES FROM EDUCATORS IN BORDER TOWNS

A Dissertation

by

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ABSTRACT

The purpose of this study was to examine teachers' perspectives of the implementation of professional development in elementary schools in border cities between Mexico and the United States with high populations of English learners (ELs). Particularly, this study explored teachers' perceptions of Project English Language and Literacy Acquisition (ELLA-V) as a type of formal professional development. Project ELLA-V is a U.S. federally funded Investing in Innovation (i3) grant (U411B120047). The purpose of project ELLA-V was to increase English language acquisition in students in kindergarten through third grade. Project ELLA-V focused on helping teachers understand the development of students' English language acquisition by implementing strategies from a research-based model.

A review of the literature illustrates how professional development has evolved leading up to the most recent developments in virtual professional developments (VPD), what is needed for teacher learning, the types of programs research has found to be more successful, the role of administration, the cost effectiveness of professional development, and how different programs such as virtual professional development influence teachers, their practices, and student achievement. I sought greater understanding of the effectiveness of different types of professional development, teacher satisfaction, and student success. In this multiple case study, 22 teachers and 5 principals from 14 elementary schools in four school districts were interviewed to examine their experiences with virtual professional development participation, implementation, satisfaction, and teachers' perceived student success.

Over the course of the year that ELLA-V was implemented, there were fundamental changes in beliefs and instruction of 20 teachers such that the teachers' role evolved from teacher-centered to a student-centered instruction by engaging them in a variety of linguistic

strategies and encouraging them to speak more in English. Changes in the instruction were directly related to changes in their students' achievement. Teachers found not only that students could produce more complex language the more they are exposed to English and practice on a regular basis, but also that students gained more confidence as a result of their participation in the program. The findings suggest that understanding children's language development can help teachers to make the needed changes. The materials introduced in the virtual professional developments proved to be transferable to other subjects. Teachers reported that the strategies used for English language instruction were also applied to other subjects and to all instruction in some cases. Teachers reported that students' English increased, and their academic achievement in reading, math, and science as measured by the state assessment also increased. The study revealed insights about sustainability of changed practice and successful implementation of professional development. Nine major themes emerged from the research study: (a) streamlining professional development (PD), (b) challenges and opportunities in the adaptation of virtual professional development (VPD), (c) VPD promotes and facilitates learning communities in schools and with remote sites, (d) increased teacher confidence, (e) encourages teacher reflection, (f) commitment to fidelity of implementation, (g) linking professional development to student outcomes, (h) knowledge gained from professional development highly transferable, (i) teachers as critical consumers of professional development.

DEDICATION

I dedicate this little piece of my life to:

My Mother

My inner voice. You left me all too soon, yet you live in me

I know you would be oh so proud.

My Dad, My Super Potato

My pillar and partner in crime

My Brother

My never-ending voice of reason

And

Of course, to My Emilia, Mi Mirrunga

My sweetest engine and motivation and for whom I strive to be the best example I can be

Me derrites el alma

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And of course, my littlest love, el amor de mi vida, my daughter, Emilia, mi Mirrunga: You are my greatest inspiration. I hope that you live intensely every day of your life.

My wish for is that this life becomes all that you want it to,

Your dreams stay big, your worries stay small,

You never need to carry more than you can hold…

I hope you know somebody loves you, and wants the same things too

Yeah, this, is my wish.

(Rascal Flats, My Wish)

Potato, Bro, and Emilia, son mi mundo entero. Los quiero mucho mucho mucho.

As I finally conclude this adventurous chapter of my life, I want to thank all of you one more time. I will always take you with me. I would not have been able to this without each one of you. You helped me to write this story. I am blessed.

CONTRIBUTORS AND FUNDING SOURCES

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CHAPTER I

INTRODUCTION

Researchers (e.g., Akiba & Liang, 2016; Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Fennema, Carpenter, Franke, Levi, Jacobs, & Empson, 1996; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Tong, Irby, & Lara-Alecio, 2015; Soder, 1991) have suggested that highly qualified and highly effective teachers are critical to student success because teachers are considered to have the strongest, most direct impact on student achievement. Presumably, teachers become more and more highly qualified every year (Borko, 2004; Christie, 2014). Still, challenges regarding teacher quality continue to be relevant and deserving of attention (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012). New expectations and new academic standards for students require new teaching methods for teachers that require more critical thinking, more problem solving, and deeper subject matter knowledge (Scribner, 1999). For example, states now have to meet their own set goals as delineated in the 2015 Every Student Succeeds Act (ESSA) (Hess & Bell, 2017). According to Lomako, Hecker, and Hubler (2018), the future of the economy in our country depends on preparing all students for success. A focus on continued professional education arises from the need to continuously provide high quality education to students.

Of greater concern in the discussion of student successful outcomes and teacher preparation, is the continued achievement gap between English-dominant students and English Learners (ELs) (Crawford, Schmeister, & Biggs, 2008; Smith, 2014). Twenty eight percent of school age children in the United States speak a language other than English at home, and schools continue to grow culturally and linguistically diverse (Mellom, Straubhaar, Bladeras,

Ariail, & Portes, 2018; Tanguay, Bhatnagar, Barker & Many, 2018). Nonetheless, the teacher demographics remain the same, monolingual, White, female, and with little experience with diverse populations from different socio-economic, linguistic, ethnic, and cultural backgrounds (Mellom, Straubhaar, Bladeras, Ariail, & Portes, 2018; Molle, 2013; Tanguay, Bhatnagar, Barker & Many, 2018). Further exacerbating the language barrier is that approximately 70% of EL children are categorized as economically challenged (Hartman, Winsler, & Manfra, 2016). Economically challenged students earn lower school grades than their higher income counterparts, and these educational gaps widen as the years progress (Hartman, Winsler, & Manfra, 2016). Hiring certified teachers trained to work with EL students can be costly for districts. A more cost-effective option is professional development programs where teachers can be trained with the necessary knowledge and skills to work with ELs (Karabenick & Noda, 2004; Tong, Irby, & Lara-Alecio, 2015). The goal, therefore, is to prepare teachers that are sensitized to the critical issues and challenges not only of those related to the education of ELs, but also with all students to continue to be able to compete in the global market (Mellom, Straubhaar, Bladeras, Ariail, & Portes, 2018; Smith, 2014). Thus, there is a renewed attention toward teachers as adult professional learners because continuing professional education (CPE) is at the core of educational reform to transform and elevate teaching and learning into the next millennium to meet global economic high standards (Gravini, 2007; Smith, 2014; Wilson & Berne, 1999). Crow (2009) suggests that with globalization of the economy, the United States needs to compare the educational standards to those in other systems in other parts of the world.

Teacher professional development has, thus, moved to center stage to keep up with the United States' global competitiveness (Brand, 1997; Smith, 2014). Continuing professional education (CPE) has been defined in a variety of contexts. It is also known as professional

development, in-service, continuing professional development (CPD), lifelong learning, and staff development. For the purposes of this study, the term professional development will be used (Gravani, 2007). The core purpose of professional development is to improve teacher quality and their practices in the classroom, and eventually improve student learning (Akiba & Liang, 2016; Dash, de Kramer, O'Dwyer, Masters, & Russell, 2012; Irby, Sutton-Jones, Lara-Alecio, & Tong, 2016; Scribner, 2003; Whitworth & Chiu, 2015).

Researchers, educators, administrators, and even politicians continually search for methods that will help students succeed in school and beyond. The problem with professional development is that as a field, little is known about how best to provide professional development and what teachers learn in those professional development opportunities (Boyd, Grossman, Lankford, Loeb, & Wychoff, 2009; Irby, Sutton-Jones, Lara-Alecio, & Tong, 2016; Tong, Irby, & Lara-Alecio, 2015; Torff & Sessions, 2008; Wilson & Berne, 1999). There continues to be a gap between professional development efforts, teacher needs, and students' success (Guskey, 2014; Lewis, 2002). For example, traditional professional development facilitators are outsiders with little knowledge of what happens in the classrooms and thus often present irrelevant and at times boring information (Molle, 2013; Wilson & Berne, 1999). The professional development sessions should not only include teachers, but also teachers of teachers, or facilitators (Tanguay, Bhatnagar, Barker & Many, 2018). In so doing, educators of teachers and facilitators increase their knowledge base and are better prepared to model effective practices and work more efficiently with a diverse pool of teacher candidates (Tanguay, Bhatnagar, Barker, & Many, 2018). Alternative forms of professional development such as on-line or virtual professional development help districts with the social responsibility to reach all teachers and administrators with resources and new developments in teaching practices that

would otherwise not be available (Dash, de Kramer, O'Dwyer, Masters, & Russell, 2012; Delfino & Persico, 2007; Lewis & Abdul-Hamid, 2006; Reeves & Li, 2012; Tong, Irby, & Lara-Alecio, 2015).

Many reform efforts have failed because teaching in the United States has some characteristics of professionalization but not entirely (Cohen & Mehta, 2017). Teacher training programs vary not only in professional development programs, but also in the teacher preparation programs (Boyd, Grossman, Lankford, Loeb, & Wychoff, 2009; Cohen & Mehta, 2017; Goodlad, 1990; Harris & Sass, 2011). Researchers (i.e., Cohen & Mehta, 2017; Crow, 2009; Soder, 1991) have found that standards for entry are low and often or alternative certification programs complicate the regulation of quality; training is short and often is not reflected in practice; and daily demands on teachers often interfere with the improvement of practice. Scribner (1999) found that teachers could take courses that are unrelated to their teaching assignments, yet they can still have their license renewed. More importantly, Boyd et al. (2009) found that the experience of teachers in teacher preparation programs does affect student achievement. Thus, it is clear that targeted professional development is necessary for teachers, as with other professionals in other disciplines, to stay current with developments and fill in the gaps of formation if any exist (Soder, 1991). Since there is not much evidence as to which professional development programs are most successful (Boyd, Grossman, Lankford, Loeb, Wychoff, 2009; Fennema, Carpenter, Franke, Levi, Jacobs, & Empson, 1996; Molle, 2013; Torff & Sessions, 2008; Wilson & Berne, 1999), I aimed to explore professional development practices to a greater extent and its related impact on student achievement. Particularly, this study was focused on virtual professional development (Corcoran, Ross, Irby, Tong, Lara-Alecio, & Guerrero, 2014; Irby, Sutton-Jones, Lara-Alecio, & Tong, 2016; Tong, Irby, & Lara-

Alecio, 2015) practices, both formal and informal, in Texas border communities with high numbers of ELs, because they are most in need of highly qualified teachers that can provide high quality instruction to close the education gaps between them and their native English speaking classmates (Hartman, Winsler, & Manfra, 2016; Mantero & McVicker, 2006; Mellom, Straubhaar, Bladeras, Ariail, & Portes, 2018; Molle, 2013; Smith, 2014; Tanguay, Bhatnagar, Barker & Many, 2018).

The Study

This study is part of a sustainability aspect of the virtual mentoring and coaching (VMC) for teachers participating in Project English Language & Literacy Acquisition — Validation (ELLA-V), a five-year, Investing in Innovation (i3) validation study on English language development in grades kindergarten through three.

This multiple case study was targeted to investigate teachers and principals' perspectives on Virtual Professional Development (VPD) after their participation in a U.S. federally-funded Investing in Innovation (i3) grant project, English Language and Literacy Acquisition – Validation (ELLA-V) as a form of formal long-term virtual professional development and other more informal and traditional professional developments. I examined the perceived impact of teacher change through interviews and reflective narratives of themselves and their students' performance as a result of their participation in virtual professional development. Teacher interviews took place the year after they completed participation in Project ELLA-V. Teachers' reflective narratives provided insights into what professional developments they deem more beneficial for themselves and their students.

The purpose of ELLA-V has been to help teachers add to their instructional knowledge base about how best to teach proper academic language English to Spanish-dominant ELs using a research-based approach for effective quality instruction. Through ELLA-Virsity teachers are able to access research based professional learning training sessions directed towards educators working with English learners (ELs). ELLA-Virsity offers live webinars as well as a collection of videos of previous webinars. The ELLA-V strategies transfer to other subject areas, thus increasing student achievement in general and not just in English language acquisition. The idea is that if they improve and learn the English as a second language, they will gain confidence and be able to apply those skills to reading, math, social studies, science, and any other subjects. Teachers in the program are taught how to approach diverse students, strategies to ask higher order thinking questions, probe for complete sentences, and assist students in their learning. The teachers in the program are presented with a series of research-based strategies to benefit English learner students. These strategies include academic language scaffolding, visual and modeled talks, flexible groupings, shared reading, leveled questioning, manipulatives, and total physical response. Students should have ample opportunities to practice talking and writing in English and teachers should elicit student thinking and participation. The results of this study include a description of teacher and administrators' perspectives of virtual professional development, a discussion of the types of professional developments that teachers consider more beneficial for them and their students, and a discussion on implications of the study and recommendations for future research.

Research Questions

Three research questions were included in this study. They are as follows:

1. To what extent does virtual professional development impact teacher and student performance?

2. To what degree did Project ELLA-V impact English acquisition for native Spanish-speaking students in border communities in grades kindergarten through third grade based on teachers' perspectives?

3. What types of professional development do teachers and administrators perceive to have more impact on teachers, students, student learning, and student confidence?

Definition of Terms

Professional Development

The National Staff Development Council and President Obama's Every Student Succeeds Act defines professional development as efforts on behalf of schools and education agencies for providing educators with knowledge and skills necessary to ensure student success in a well-rounded education and to meet state academic standards. The efforts are sustained, intensive, collaborative, job-embedded, data driven, and classroom focused as opposed to stand-alone, 1-day, or short-term workshops. Professional developments include activities that improve teachers' knowledge of academic subjects, their understanding of how students learn, and teachers' ability to analyze data and student work.

Professional Development is also known as in-service, staff developments, teacher training, or Continuing Professional Education (CPE). CPE is any learning experience that occurs after completion of a teacher preparation program (Bechtel and O'Sullivan, 2006; Kennedy, 2014). Torres, Zellner, and Erlandson (2008) defined professional development as "actions on the part of the state or local school district to provide teachers and staff opportunities to acquire knowledge and skills to inform practice" (p. 3). In this definition, a top down approach is assumed where the teachers have no control over what professional developments they attend.

Project English Language and Literacy Acquisition - Validation (ELLA-V)

Between 2003-2008, researchers with Project English Language and Literary Acquisition (ELLA) investigated the efficacy of structured English immersion and transitional bilingual education models in teaching Spanish-speaking kindergarteners' English language and literacy skills. Project English Language and Literacy Acquisition - Validation (ELLA-V) is a U.S. federally-funded Investigation in Innovation (i3) grant, which validates and scales up the earlier project. Investigators conducted a randomized, controlled trial to validate the individual interventions of Project ELLA and determine the degree of impact on English acquisition for native Spanish-speaking students in kindergarten through third grade. Project ELLA and ELLA-V are estimated to impact 75 elementary school campuses, 600 teachers, and 15,000 students across the state of Texas (Center for Research and Development in Dual Language and Literacy Acquisition, crdlla.tamu.edu). Project ELLA-V provided participating teachers with scripted lesson plans, materials to accompany each lesson plan, it has a collaboration component through Webinars where participating teachers from all cities come together to plan and discuss, and virtual real-time coaching where teachers are guided through a bug-in-the-ear.

Informal Professional Development

Informal professional development is what current literature refers to as a drive-by or short-term, one or two-hour training workshop professional development. Informal professional developments are commonly comprised of the latest fad in education, a refresher that was learned years ago in initial teacher preparation courses, having to do with behavior or classroom management and often unrelated to teachers' needs or teaching assignments. They usually have no follow-up, assessment, or evaluation, and there is no way of knowing if the teacher truly is implementing what was learned (Akiba & Liang, 2016; Borko, 2004; Christensen, 2006; Little, 1993; Scribner, 1999; Scribner, 2003; Smith, 2014; Wilson & Berne, 1999). Informal professional developments can be online courses that are not formally facilitated.

Formal Professional Development

Formal professional development is what current literature describes as long term, systematic professional development with teacher change in beliefs and practices as the goal. Formal professional development deals more with curriculum content change and methods of implementation in the classroom. Formal professional development realizes that change is a process and a cycle, which includes the delivery or presentation of the material and method being taught, the facilitator provides timelines for assignments, support in implementation, feedback, assessment and evaluation are key, making modifications according to the assessment results, re-teaching, and continuous implementation (Akiba & Liang, 2016; Borko, 2004; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Little, 1993; Scribner, 1999; Scribner, 2003; Wilson & Berne, 1999). For the purposes of this research, Project English Language and Literacy Acquisition – Validation (ELLA-V) is considered formal professional development because of its duration. It

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lasted a year for each period of implementation and teachers were expected to continue instruction with the strategies and lesson plans provided. It was systematic and dealt with curriculum content change and methods of implementation because teachers were provided with scripted lesson plans and materials to go with each lesson. It provided support for implementation. Teachers had virtual meetings with ELLA-V coaches and other teachers in different cities that were also participating in the project. Teachers that participated in ELLA-V project were provided with a camera for their classrooms that was turned on throughout the duration of the program implementation. Assessment and observations were done remotely with the use of the camera. Teachers in the ELLA-V project also participated in real-time coaching. They were provided with a bug in the ear through which ELLA-V coaches could redirect teachers as they were teaching their lesson in real time. Finally, teachers were expected to continue the implementation of ELLA-V lessons after the year of training participation. This study assesses the continuous implementation of the program with a self-report interview and checklist that was provided to the teachers at the time of the interview.

Virtual Professional Development (VPD)

Virtual professional development (VPD) or online professional development may be of a formal or informal nature. It can be delivered in several ways: (a) synchronous with facilitator, (b) asynchronous with facilitator, or (c) asynchronous without facilitator (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Tong, Irby, & Lara-Alecio, 2015). Participants may be involved as a group, individually, or a combination (Tong, Irby, & Lara-Alecio, 2015). VPD has been championed as the "anytime, anywhere" alternative to traditional professional development (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012). Participants can go online at their leisure,

but even in informal settings, collaborative tools can be utilized so that participants can interact with each other and possibly the facilitator (Irby, Sutton-Jones, Lara-Alecio & Tong, 2016). They may be beneficial for self-directed learners, free, accessible worldwide, and is short-term obligation (Irby, Sutton-Jones, Lara-Alecio & Tong, 2016). Another benefit is cost effectiveness. It is less expensive for schools, districts and teachers because there is no fuel cost because there is no drive time, and there are no professional development costs such as building, materials, utilities, and refreshments (Irby, Sutton-Jones, Lara-Alecio & Tong, 2016). Nonetheless, because VPD uses technology such as the Internet, teachers' computer readiness skills need to be taken into account. VPD may not be suitable for teachers that have limited or no experience with technology. Further, it is necessary for participants to have access to a computer with reliable Internet connection (Reeves & Li, 2012).

Statement of the Problem

School improvement efforts usually include a professional development component; nevertheless, professional development is often an activity that does not relate to what teachers and schools need in order to prepare teachers and increase student achievement (Lewis, 2002). According to Little (1993), "The dominant training model of teachers' professional development is a misfit with the ambitious visions of teaching and schooling embedded in the current reform initiatives" (p. 5). Teacher professional development has generally failed to improve teaching because many times it is delivered in ways that are not conducive to learning, does not have future application, and is not relevant to the intended context (Newmann, 2000; Scribner, 1999). The problem, thus, arises not in the lack of professional development programs, but in the

inconsistent implementation and lack of evaluation of such programs (Akiba & Liang, 2016; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016). The problem is augmented for teachers of English Learners (ELs). Not all states offer English as a second language (ESL) or bilingual/dual language certification, endorsement, or trainings for teachers of ELs, and if there are, these trainings are too often informal, one-shot, stand-alone workshops that often fail to change teachers' knowledge, practices, beliefs, and attitudes towards diverse students in significant ways (Antunez, 2002; Smith, 2014). In the United States, 41% of teachers have taught or currently teach EL students; however, less than 13% of teachers in the United States are certified or have received training on how best to teach EL students (Antunez, 2002). Therefore, this multiple case study aims to examine and describe teachers and administrators accounts of professional development practices currently being implemented in schools in border communities with high populations of EL students in an effort to bring light as to what are the best practices that will help prepare teachers to teach students and increase academic achievement.

Purpose Statement

The purpose of the current study was to determine based on teachers' perspectives the degree of impact on English acquisition for native Spanish-speaking students in grades kindergarten through third grade as a result of teacher and student participation in Project English Language and Literacy Acquisition – Validation (ELLA-V). This multiple case study explored the impact of ELLA-V project as a form of formal virtual professional development implemented in four school districts in border communities with high populations of ELs. I studied teachers and administrators' perspectives to see what programs they consider more

effective for teacher growth, improved teaching, and student success. The purpose of this multiple case study was to see how successful the ELLA-V virtual professional develop program was among teachers and administrators and how this program shaped teacher practice and student learning. This study was designed to provide more insight into the issues of the professional development best practices argument.

Significance of the Study

The findings of this study can offer researchers, policymakers, and practitioners a greater awareness of the impact of professional development. Given the critical role teachers play in student lives, an examination of their experiences is important for informed professional development to occur. This study promises to add to the literature on professional development by analyzing the implementation of project English Language and Literacy Acquisition – Validation (ELLA-V) as a type of formal virtual professional development (VPD). This study aims to bring to light teachers and principals' experiences about how professional development impacts their practice and their students. This study is significant in that it describes through reflective narratives teachers and administrators' first-hand experiences with ELLA-V as a type of formal virtual professional development and it compares these experiences with other more traditional and informal professional development practices. Furthermore, this study is significant in that it takes place in four school districts with particular border communities between Mexico and the United States with high percentages of Hispanics and English learners (ELs).

Summary

This chapter included the background and rationale for the study, a brief description of the study, terms that will be used throughout the study were defined, problem statement, purpose, and significance of the study. In the next chapter, I share a review of the literature on professional development programs, including virtual professional development, the history and evolution of professional development as a reform from the more traditional to virtual professional development, types of professional developments, formal and informal, their impact on teacher knowledge and learning, and what professional development programs research has found to yield the most benefits for teachers, administrators, and students. Further, the methodology is covered in Chapter III.

CHAPTER II

LITERATURE REVIEW

Educators, researchers, and even politicians agree that all classrooms should have highly qualified teachers. While most political reforms (e.g., No Child Left Behind and Every Student Succeeds Act) call attention to the qualifications of teachers there lacks consensus on what factors indicate teacher quality (Goodlad, 1990; Harris & Sass, 2011). Professional development is considered a means to reform to advance teacher quality because teacher quality matters and directly affects student outcomes (Birman, Desimone, Porter, & Garet, 2000; Crawford, Schmeister, & Biggs, 2008; Dash, Kramer, O'Dwyer, Masters, Russell, 2012; Desmoine, 2009; Ingvarson, Meiers, & Beavis, 2005; Kent, 2004;Miller, Gore, Wallington, Harris, Prieto-Rodriguez, & Smith, 2019; Reeves & Li, 2012; Timperly, 2008; Timperley & Alton-Lee, 2008). Nonetheless, most changes involving teacher preparation and the education system have only undergone minor changes because they require system-wide change and even though it has not been accomplished, it is still needed (Borko, 2004; Bechtel & O'Sullivan, 2006; Cohen & Mehta, 2017; Goodlad, 1990; Guskey, 2014; Newmann, 2000). Teachers would have to modify entirely how they do things in their classrooms, they would have to learn very different methods of instruction; teachers should also be taught to work together in order for the new methods to be sustainable and maintain a constant state of self-renewal (Borko, 2004; Evans, 2014; Soder, 1991). According to Cohen & Mehta (2017) "Such change would require an extensive infrastructure of coordinated materials, curriculum, teacher training, and professional development, something that has never been created system-wide in the United States" (p. 681). In order to provide the highest quality of education to students, educators, researchers, and even politicians are constantly searching for the best practices to teach, support, and motivate teachers.

This chapter focuses on the review of the literature. In the next chapters the methods for this study and findings are discussed.

Cost of Professional Development

Not only does reform require a system-wide effort, but also that effort comes with a cost associated to it. The continued development of teachers' knowledge and skills is a national industrial enterprise, with an estimated cost of $1 to $4 billion per year (Borko, 2004; Luke & McArdle, 2009; Smith, 2014; Wilson, 2013). However, despite the tremendous investment in professional development, many of these interventions do not result in sustainable practices or significant changes in teacher practice or student outcomes (Jacob, & McGovern, 2015; Smith, 2014). More money spent does not guarantee better results (Crow, 2009). Another level to consider according to Poskitt (2014) is the macro or political context. Not all educational decisions are made for educational purposes. Many changes are driven by economics or particular ideologies that may or may not serve teachers or students' interests (Poskitt, 2014). All the funds and resources can be better invested in teacher-centered collaboration and research-based learning activities led by knowledgeable teachers in pedagogical content instead of hiring outside professional development providers that only offer short-term, one-size-fits-all programs to large numbers of teachers without opportunities to engage in in-depth collaboration and discussion about their teaching (Akiba & Liang, 2016; Christensen, 2006). Another cost-effective alternative to traditional professional developments is virtual professional development (VPD) (Irby, Sutton-Jones, Lara-Alecio & Tong, 2016). VPD offers resources such as collaborating in a virtual world and how to enhance classroom instruction using technology to

teachers and classrooms that would not be otherwise available in remote areas (Ullman, 2010).

Because of the amount that is invested in professional development, it is of utmost importance to

understand the contributing factors to teacher change and increase in student achievement in

education and explore alternative modes of professional development delivery methods such as

online learning (Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Whitworth & Chiu, 2015).

Therefore, to this day, the enigma of which professional developments are most beneficial to

better prepare teachers in the most cost-efficient way still persists (Fennema, Carpenter, Levi,

Jacobs, & Empson, 1996; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Soder, 1991).

Throughout history there have been education reform efforts, not all have prevailed and most

have been small scale; thus, there is a continuous need to revise, improve, and update practices

(Dash, Kramer, O'Dwyer, Masters, Russell, 2012; Guskey, 2014).

History of Education Reform and Professional Development

Efforts to improve schooling and teacher professional development have usually been

closely coupled. For instance, the professional development trend can be traced back to the

1830s with Horace Mann's common school reform initiatives (Cohen & Mehta, 2017;

Newmann, 1996). Mann argued that to improve the moral and socioeconomic condition of the

United States, the common school should be free, universal, non-sectarian, public institution,

more open and nurturing, with a wider curriculum delivered by professional teachers (Warder,

n.d.). Then, during the Reconstruction movement in the 1860s, some teachers were well educated

while others had a limited education, but the demand for teachers was so great that any teacher

was welcomed (Cohen & Mehta, 2017). By the 19th century, there was still an acute shortage of

skilled teachers. Then, in the 1950s when the Soviets launched the Sputniks there was another wave of reform efforts in order to modify the curriculum to increase the academic excellence especially in math and science with more real-life applications to be able to keep up and compete globally. Nonetheless, reformers did not have a strategy to attain those goals and teachers were faced with lack of support (Cohen & Mehta, 2017). In 1983, the report A Nation at Risk called for improved teacher training programs because according to the report, teachers were not educated enough and students were not graduating or graduating with low standards (Graham, 2013). According to the report, 23 million adults in the United States were functionally illiterate at that time (Graham, 2013). Moreover, Larry Cuban's child-centered instruction in 1984 would have been a significant change in education; however, it was unsuccessful because there was no teacher buy-in and it did not solve teacher perceived problems (Brand, 1998; Cohen & Mehta, 2017; Harvey & Purnell, 1995; Hawkins & MacMillan, 1993; Reeves & Li, 2012; Timperly & Alton Lee, 2008). Teachers needed more convincing of the value of the new ways of teaching (Cohen & Mehta, 2017; Newmann, 1996). One way to solve it, involving teachers in the process (Christensen, 2006; Trehearn, 2010).

Before August 1999, teacher professional development was not a precondition for the renewal of teaching certificates (Educator Certification Overview, n.d.). When teachers were awarded their teaching certificates, it proved that they were competent, and it was for life without the need for renewal (Torff & Sessions, 2008). Then in 2002, The No Child Left Behind Act (NCLB) called for "highly qualified" teachers to teach all school children and recognized professional development as a key strategy for improving teachers' skills and effectiveness (Borko, 2004; U.S. Department of Education). Other than teachers being certified to teach, the NCLB did not delineate what factors indicated teacher quality. Presently, in order to maintain

teaching certificates, the United States federal and state education departments require

Continuing Professional Development (CPD) as a career-long process (Armour & Balboa, 2000;

Bechtel and O'Sullivan, 2006; Bolam, 1982; Whitworth, 2015). In Texas, CPD is mandatory to

renew a standard certificate. Teachers must complete 150 clock hours of CPD every five years to

renew their teaching certificates (Educator Certification Overview, n.d.; TEA.texas.gov).

Professional certificates (i.e., administrative and student services) must complete a total of 200

clock hours of CPE (Educator Certification Overview, n.d.; TEA.texas.gov). According to

President Obama, even though the goals of the NCLB were the right ones (i.e., high standards,

accountability, closing the achievement gap, etc.), in practice it did not yield the desired results

(i.e., it led to excessive testing) (Korte, 2015). Therefore, in 2015 President Obama signed into

law Every Student Succeeds Act (ESSA) as a more flexible approach making states more

responsible for their standards (Korte, 2015). The ESSA went into full effect in the 2017-2018

school year; therefore, since it is at the early stages of implementation, its impact is yet to be

seen. Professional development, thus, has become only one aspect of the attempts to keep up

with the rigorous demands on outcomes and accountability (Torres, Zellner, & Erlandson, 2008).

Professional Development in the United States

Researchers agree that among the most important purposes of professional development

is to provide educators with opportunities that will contribute to the betterment of their

knowledge, devise new instructional practices, and change teachers' beliefs and attitudes to

increase student thinking and optimize the learning outcomes of students (Bechtel & O'Sullivan,

2006; Borko, 2004; Guskey, 2014). According to Kennedy (2014) professional development

should even go beyond, she suggests that professional development should not only focus on student learning outcomes, instead "Teacher education must be infused with the kind of critical scrutiny about social purposes, future possibilities, economic realities and moral directions" (p. 241). According to Gravani and John (2004), information is being produced at a faster rate than the day before parallel to the fast-pace evolution of technology and the global economy. Thus, the education system sees the value of "continuous and lifelong learning" in order to keep up with the evolution of information, knowledge, and technology (Brand, 1997; Guskey, 2014; Gravani & John, 2004; Smith, 2014). However, even though educators and researchers agree that professional development is key to elevate teaching, there is little agreement and even less research evidence about what programs and knowledge will help teachers to teach for greater student achievement (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; Fennema, Carpenter, Franke, Levi, Jacobs, & Empson, 1996).

A wide range of offerings are available from informal short one- to two-hour courses, informal communications with colleagues, or reading professional journals, to more formal school-based training, university courses, and year-long intervention projects (Akiba & Liang, 2016; Bolam, 1982; Borko, 2004; Little, 1993; Scribner, 2003; Wilson & Berne, 1999). Most professional developments are one-day workshops, yet sometimes they are multiple sessions. Often times administrators are cornered by legislation to resort to quick solutions to get a quick boost in their test scores instead of providing quality professional developments that wholesomely improve teacher capacity (Christensen, 2006). Nonetheless, Tong, Luo, Irby, Lara-Alecio, and Rivera (2017) caution that long term professional developments may be more beneficial because the impact of a professional development intervention may take up to three years to manifest the effects on English learner students' achievements. Professional

developments should be sustained over time to develop instructional knowledge and teacher skills in order for change to occur (Irby, Guerrero, Lara-Alecio, Tong, & Rodriguez, 2012). Topics for professional development range from the new latest fad in education, content, pedagogy, educational reform, motivation and classroom management to state-mandated test preparation and changes in special education policies and procedures (Scribner, 1999; Torff & Sessions, 2008). School districts, Texas Education Service Centers (ESCs), state and county agencies, post-secondary institutions, foundations, non-profit professional organizations, private companies, schools, principals, specialists, and even teachers themselves provide professional developments using varying techniques and delivery methods (Akiba & Liang, 2016; Bolam, 1982; Borko, 2004; Little, 1993; Scribner, 2003; Wilson & Berne, 1999).

Educators experience professional development extensively throughout their careers and through a variety of delivery methods such as individual inquiry, experiential learning, conferences, workshops, school-based in-services, graduate courses, and traditional face-to-face instruction provided on- or off-site (Boyd, Grossman, Lankford, Loeb, &Wychoff, 2009; Harris & Sass, 2011; Kennedy, 2014; Scribner, 1999); online live discussions or prerecorded content courses that offer time flexibility (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Delfino & Persico, 2007; Harrington & Queen-Leering, 1996; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Reeves & Li, 2012; Tong, Luo, Irby, Lara-Alecio, & Rivera, 2017); and coaching, mentoring, learning communities, and teacher collaboration (Christensen, 2006; Goddard, Goddard, & Moran, 2007; Harrington & Queen-Leering, 1996; Koch & Appleton, 2007; Liberman & Miller, 2011; Louis & Marks, 1998; Moolenaar, Sleegers, Daly, 2012; Saunders, Goldenberg, & Gallimore, 2009). Professional development has the power to affect all areas of a school system starting with administrators at the top and trickling down to teachers and

paraprofessionals (Newmann, King, & Youngs, 2000). It affects teachers' knowledge, skills, dispositions, and can foster unity and collaboration (Newmann, King, & Youngs, 2000; Torff & Sessions, 2008). Well-versed teachers in a subject are more likely to select high-quality instructional materials, and high-quality material can also improve a teachers' knowledge in a subject (Krasnoff, 2015). Professional development can help increase a school's or even district's technical resources if teachers are provided with high quality training and support (Krasnoff, 2015). Because professional development encompasses so much, and is so broad and complex, it is difficult to measure their overall effect on teacher's knowledge, instructional practices, and student success (Krasnoff, 2015; Scribner, 1999; Scribner, 2003).

Professional Development Models'
Impact on Teacher Knowledge and Student Learning

Even though it is difficult to assess the isolated success of professional development programs because there is so much that goes into teaching, there are models that research suggests are more successful than others. Most traditional professional developments today have failed because they are fragmented, intellectually superficial (Borko, 2004), they are implemented in ways that do not take into account how teachers learn (Borko, 2004; Newmann, 2000; Wilson & Berne, 1999), and the topics are too broad such as gifted education, self-esteem, communication with parents (Irby, Guerrero, Lara-Alecio, Tong, & Rodriguez, 2012). In order for professional development to be successful, it should be individualized, planned, connected to the curriculum and instructional needs of the teachers (Irby, Guerrero, Lara-Alecio, Tong, & Rodriguez, 2012). Administrators and leaders that design and deliver professional developments

must not only focus on the content that is being taught, but also understand how teachers learn, grow, change in the process, and the conditions that promote and sustain growth (Bechtel & O'Sullivan, 2006; Borko, 2004; Evans, 2014; Newmann, 2000; Wilson & Berne, 1999). According to the adult learning theory, in order for professional developments to be successful, it should allow for some teacher autonomy, teachers should understand the need, and teachers should be allowed time to implement and practice the newly acquired knowledge (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Irby, Guerrero, Rafael-Alecio, Tong, & Rodriguez, 2012). Teacher reflection is also an important aspect of professional developments (Ball, 1996; Brand, 1998; Cohen & Mehta, 2017; Harvey & Purnell, 1995; Hawkins & MacMillan, 1993; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Reeves & Li, 2012; Timperly & Alton Lee, 2008; Wilson & Berne, 1999). In their study with project ELLA-V, Irby, Guerrero, Lara-Alecio, Tong, and Rodriguez (2012) found that teachers gained confidence, as they were able to reflect in their practice. Teachers need time to reflect on their practice and how professional developments influence their students' achievements (Irby, Guerrero, Lara-Alecio, Tong, & Rodriguez, 2012).

Critical to the change process is for teachers to see the need to try new methods of teaching and assessing (Bechtel & O'Sullivan, 2006). Reform efforts have failed in the past because teachers do not buy into the necessity for change (e.g., Cuban's proposed child-centered instructional reform) (Adey, Hewitt, Hewitt, & Landau, 2004; Cohen & Mehta, 2017; Newmann, 1996). Researchers believe that teachers can change teaching practices if teacher knowledge changes (Fennema, Carpenter, Franke, Levi, Jacobs, & Empson, 1996; Tong, Luo, Irby, Lara-Alecio, & Rivera, 2017). Teachers learn in many different ways, both informally in their classrooms and school communities and formally in professional development courses and workshops (Borko, 2004; Scribner, 1999). Not all teachers experience change or learn the same

when they participate in professional developments and different types of professional developments impact different aspects of teaching (Borko, 2004). In essence, professional development that results in teacher learning and changes attitudes, beliefs, and teacher practices subsequently leads to increased student achievement (Whitworth & Chiu, 2015).

According to researchers, in order for a professional development to be effective, it must include hands on opportunities, motivating activities with real life connections, time for reflection, follow-ups, long-term support, teacher coaching, ongoing interactions with colleagues, time of implementation taken into consideration (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012), meaningful content and contexts need to be provided, it must effectuate some form of change, it must be strategic, solve a perceived problem, and challenge teachers both intellectually and professionally (Ball, 1996; Brand, 1998; Cohen & Mehta, 2017; Crawford, Schmeister, & Briggs, 2008; Harvey & Purnell, 1995; Hawkins & MacMillan, 1993; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Reeves & Li, 2012; Timperly & Alton Lee, 2008; Wilson & Berne, 1999). Also important for PD to be effective, teachers need to be motivated, a teacher buy-in is needed, and teachers must put forward a substantial effort and personal interest in the training for professional developments to be effective (Ball, 1996; Brand, 1998; Cohen & Mehta, 2017; Crawford, Schmeister, & Briggs, 2008; Harvey & Purnell, 1995; Hawkins & MacMillan, 1993; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Reeves & Li, 2012; Timperly & Alton Lee, 2008; Wilson & Berne, 1999). Extrinsic motivation such as remuneration and license renewal requirements can play an important role in teacher participation in professional development depending on their career stage (Scribner, 1999). For example, veteran teachers or teachers that are at the top of the pay scale, avoid formal professional developments because they feel their time is worth more than the money that may be obtained from participating in

professional developments (Scribner, 1999). Thus, the timing of professional development implementation also impacts the results of the professional development. For example, Torff & Sessions (2008) in their study with New York teachers found that professional development would be best received when teachers are in their second and third year of teaching. Three phases arose in their findings, but they are uncertain as to why teachers in their first year of teaching do not favor professional development; however, teachers in their second and third year of teaching view professional development more positively.

More importantly and of greater concern is the training for teachers of diverse populations such as English Learners (ELs). Karabenick and Noda (2004) found that even though the majority of teachers in their study were interested in serving ELs in the regular classroom, it was also evident in their responses that they were in need of intensive professional development and training to provide them with the content knowledge and instructional skills to ensure quality instruction, and to improve their confidence in teaching EL students. It is important to incorporate instruction of bilingual education and English as a second language because of gaps in teacher knowledge of second language acquisition and learning (Karabenick & Noda, 2004). Teacher preparation programs, professional developments, and trainings for teachers of ELs should be infused with high standards such as proficiency in two languages, teach the impact that students' cultures have on their learning, and teach how to assist students in developing language (Antunez, 2002). EL pedagogy should also be enriched by joint productive activity, language development across curriculum, contextualization, making home-school connections, teaching higher order thinking skills, and instructional conversation (Mellom, Straubhaar, Bladeras, Ariail, & Portes, 2018; Tong, Luo, Irby, Lara-Alecio, and Rivera, 2017). An "ideological shift" is possible when teachers are exposed to professional development

focused on culturally responsive pedagogies that can help shift teacher attitudes towards EL students over time (Mellom, Straubhaar, Bladeras, Ariail, & Portes, 2018). Attitudes are important in respect to all students not just when teaching EL students because they affect how teachers engage with their students, which in turn has an effect on student motivation and could impact student achievement (Burant & Kirby, 2002; Karabenick & Noda, 2004; Mantero & McVicker, 2006; Mellom, Straubhaar, Bladeras, Ariail, & Portes, 2018; Molle, 2013). High standards should not only be applied to professional developments of ELs, but to all professional developments in general, yet again, little agreement is found in the literature as to what characterizes teacher and professional development high standards.

Few studies have examined the impact of teacher participation in formal and informal professional developments on student achievement, and there are even fewer studies that focus on virtual professional development (VPD) for teachers of English learners (EL). Tong, Luo, Irby, Lara-Alecio, and Rivera (2017) found that teachers' pedagogical practices can be modified as a result of effective professional development consisting of ongoing teacher training embedded with coaching and mentoring on ESL strategies and vocabulary instruction significantly increased student achievement. Further, Crawford, Schmeister, and Biggs (2008) studied the effects of professional development on teachers' use of sheltered instruction in linguistically diverse classrooms. They found that intensive, focused individualized professional development resulted in positive outcomes for teachers. Teachers made significant improvements in sheltered instruction (Crawford, Schmeister, & Biggs, 2008). According to Akiba and Liang (2016) in their three-year longitudinal study, they analyzed how teachers spent their time in informal professional learning activities and its impact in student achievement in order to find which activities should be promoted and supported to help administrators more

efficiently use professional development resources to increase student learning. They found that the majority of teachers participate in informal types of professional development such as teacher collaboration, informal communications, and independent learning activities that were more beneficial at increasing student achievement than more formal types of professional developments such as professional development programs and university courses (See Table 1). Harris and Sass (2011) found that teacher productivity increases with experience from informal on-the-job training. Similarly, Scribner (1999) found that informal interactions improved schools, attracted, and retained excellent teachers more than financial incentives. Evans (2014), however, cautions that to assume an immediate impact of professional development on student learning is over-simplistic because it fails to take into consideration the complexity and multidimensionality of professional learning and development. Instead, researchers contend that new ideas, ways of thinking, and meaningful learning that has been recently acquired, take time to be incorporated into practice, just as it is for students (Borko, 2004; Evans, 2014; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016). Therefore, alternative forms of professional development should also be explored to better serve teachers.

Researchers have found that as with face-to-face collaboration, online professional development programs that incorporate ongoing, intensive, and interactive learning community models are as likely to be successful or even more so than traditional face-to-face professional development programs that are short and incomplete (Christensen, 2006; Dash, De Kramer, O'Dwyer, Masters, & Russell, 2012; Delfino & Persico, 2007; Harvey & Purnell, 1995; Reeves and Li, 2012). Smith (2014) devised an on-line teacher education program to prepare teachers of English Learners (ELs) that is promising as a method of professional development delivery for kinder through high school teachers. Similarly, Irby (2016) created and coined the massive open

online professional informal individual learning (MOOPIL) (Irby, Sutton-Jones, Lara-Alecio & Tong, 2016). MOOPILs are intended to be free to the user and have characteristics of both formal and informal learning. They are informal in that the time duration can be from 20 minutes to three weeks with up to three hours per week covering brief targeted skills. They may or may not be facilitated, and they are more successful when integrated with face-to-face professional development (Irby, Sutton-Jones, Lara-Alecio & Tong, 2016). The knowledge obtained from the research of Irby, Sutton-Jones, Lara-Alecio & Tong (2016) and Smith (2014) needs to be applied not only to the development of online professional training programs, but to all types of professional developments.

Virtual professional development (VPD) or "online professional development (OPD) has proliferated in an effort to eliminate various barriers to in-service teacher training, such as access and scheduling" (Reeves & Li, 2012, p.389). Reeves and Li (2012) analyzed data from a US large-scale e-Learning for Educators ongoing online PD initiative, which delivered online courses facilitated with asynchronous discussions. The online courses covered discipline, pedagogy, technology, assessment, and special populations. The online program also promoted peer-to-peer discussions. The approach is similar to Kennedy's (2005) face-to-face community of practice model (discussed in the following section). As a result, Reeves and Li (2012) found that in general, participants' technical skills improved; and, after the program, participants 'strongly agreed' that "online professional development workshops can be as effective as traditional face-to-face professional development workshops" (p. 397). Similarly, Dash, Kramer, O'Dwyer, Masters, and Russell (2012) in their study of an online mathematics fifth grade teachers' professional development program found that teachers in the experimental group had higher pedagogical content knowledge scores and higher scores for pedagogical practices;

however, regardless of teachers' participation in the control or experimental group, there were no significant differences in students' achievement in mathematics. Added benefits of VPDs are the immediacy with which participants can receive feedback (Lewis & Abdul-Hamid, 2006); and, if teachers are exposed to online, VPD, or artificial intelligence during their training, it is more likely that they will implement similar techniques in their classrooms (Delfino & Persico, 2007).

As with most things, there is a less than optimum side of virtual professional development (VPD). Lewis and Abdul-Hamid (2006) cautioned about the focus of VPD education in that "the emphasis should be placed on managing the learning experience, not on managing the technology" (p. 84). Nonetheless, the reality is that not all teachers are prepared to experience technology in professional developments (Brand, 1998; Delfino & Persico, 2007; Reeves & Li, 2012). Some setbacks of VPD are teachers that have limited experience with technology may not enjoy the full benefits of VPD, they may feel anxiety, or they may be hesitant at the beginning; some participants may not have access to the technology required for VPD (Brand, 1998; Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Delfino & Persico, 2007; Reeves & Li, 2012); and, participants may develop a sense of isolation (Lewis & Abdul-Hamid, 2006). According to Delfino and Persico (2007), other complications associated with VPD may include: technical issues; individual and cultural issues (e.g., emotional barriers); pedagogical and methodological issues; and, social and environmental issues.

Another alternative to professional developments (PD) is the application of artificial intelligence (AI) to both traditional and more innovative PDs such as virtual professional developments (VPD). AI aims at incorporating science technology to do things that humans find cumbersome in order to make education more effective and efficient by using algorithms to predict, automate, integrate, acclimate, delineate, identify, and "'diagnose' knowledge gaps more

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precisely than anyone else" (Kulkarni, 2019); and aid with the logistics in education such as planning and assessing both classroom instruction and professional developments for teachers (Altinay, Karaatmaca, Altinay, & Dagli, 2019; Bonderud, 2019; Sekeroglu, Dimililer, & Tuncal, 2019). In their research, Sekeroglu, Dimililer, & Tuncal (2019) explain how teachers can implement AI into their classrooms by using algorithms to individualize learning and assessments for each student and increase student achievement. These same algorithms can be applied to teachers and individualized professional development programs by predicting and classifying teacher features a priori and targeting those areas of greater need. Kron, Fetters, Scerbo, White, Lypson, Padilla, Gliva-McConvey, Belfore II, West, Wallace, Gutterman, Schleicher, Kennedy, Mangrulkar, Cleary, Marsella, & Becker, (2017) found that communication skills could be improved using a computer simulator with virtual humans as teachers. AI's adaptive learning processes can help bridge educational gaps in culturally diverse students and different school districts making it more equitable; it can individualize learning; and level learning gaps for students that fall behind (Kulkarni, 2019). As with VPD, AI in education also has its downsides such as human bias, overall accuracy, ethical and privacy issues, and human employment (Bonderud, 2019). Grading is not equitable; for instance, an automated essay grading system, E-rater, gave students from mainland China overall higher scores than African American students. Human graders, on the other hand, graded both groups more equitably (Kulkarni, 2019). Therefore, AI processes are more successful when AI is used to aid teachers in their teaching, and not replacing the teacher (Kulkarni, 2019).

There are several professional development models. Kennedy (2005) identifies nine models of Continuing Professional Development (CPD): training, award-bearing, deficit, cascade, standards-based, coaching/mentoring, community of practice, action research, and

transformative. The models can be categorized as formal or informal types of professional development according to their purpose (See Table 1). The training, the award-bearing, the deficit, and the cascade models are more informal types of professional development and are characterized by transmission of knowledge with low professional autonomy to teachers and practitioners (Kennedy, 2005). On the other hand, the standards-based, the coaching/mentoring, and the community of practice models are transitional or formal types of professional development; and the action research and transformative models are formal types of professional development with more professional autonomy (Kennedy, 2005). Some of the models have qualities of both formal and informal professional developments depending on how they are implemented. First, the Training Model is the most common; it assumes a single solid reality (Gravini, 2007; Kennedy, 2005). This type of training can be on- or off-site; it is centrally controlled; and a narrow view of education gives preference to the standardization of training over teacher individual preference and need for development. The teacher plays a passive role where the deliverer controls and limits the agenda, which fails to connect with teachers' purpose and teachers' classroom assignment context. It does not measure the impact in practice; it lacks an assessment component both of teacher growth or learning and student success. Notwithstanding the training model's drawbacks, it is still hailed as an effective model to introduce new knowledge and contributes to the augmentation of skills and knowledge to the existing repertoire (Gravini, 2007; Kennedy, 2005).

Table 1

Informal versus Formal Types of Professional Development

	Informal PD	Formal PD
Types	Colleague conversations Informal teacher collaboration Independent learning activities Training Model Award-Bearing Model Deficit Model	Systematic University courses Standards-Based Model Coaching/Mentoring Model Community of Practice Model Action Research Model
Duration	Short-term One or Two Hours	Long-term One day to one year or more
Assessment	No follow-up, assessment, or evaluation	Process / cycle Assessment, evaluation, re-evaluating procedures, reapplying and implementing continuously.
Support	No support is provided after the PD workshop	Continuous support provided for implementation, feedback, modifications, etc.
Content	Latest fad in education Refresher course Behavior or classroom management	Curriculum content change Methods of implementation
Facilitator	May or may not be present especially in on-line prerecorded courses	Facilitator is present for delivery of content and support thereafter.
Pros	Short-term commitment Free Available worldwide online Flexible scheduling	Complete learning cycle Time to process and learn information

Second, the Award-Bearing Model consists of university-validated programs of study, which can be perceived as quality assurance or as control from the universities (Kennedy, 2005). In turn, academic and intellectual autonomy may be sacrificed at the expense of particular ideological imperatives at the school's level. According to Scribner (1999), teachers found useful these formal university courses, workshops, and conferences when they were intellectually challenging and relevant to their unique contexts; they were also positively viewed as a means to escape professional isolation. In their study, Boyd, Grossman, Lankford, Loeb, and Wychoff (2009) found teachers were more effective and students showed greater gains when teachers participated in programs that focus more on classroom work, programs that provided more oversight of student-teaching experiences, engaged in the actual practices involved in teaching (e.g., listen to a child read aloud to assess them, plan a lesson, or analyze student work), programs that provided opportunities for teachers to review the curriculum, and programs that provided learning that is grounded in the practice of teaching. Third, the Deficit Model or performance management model aims to improve perceived weaknesses in teacher performance. It is subjective in that expectations for competent performance are unclear. Even though it can be beneficial to strengthen areas of weakness, this model focuses blame and responsibility solely on the individual teacher while collective competence is not taken into account (Kennedy, 2005). Fourth, the Cascade Model involves one or two teachers from a school or district attending a workshop or informal professional development usually of short duration and then cascading or transmitting the information by becoming the trainer to other teachers (Kennedy, 2005). This model is accommodating when resources are limited and to minimize simultaneous absentees; however, information may be diluted because the teacher that attended the training may select or modify information that is transmitted from the original training leaving colleagues only with

partial information (Kennedy, 2005). Christensen (2006), however, found that teachers rated professional developments that were led by classroom teachers as having the greatest impact on their students' learning. Similarly, the fifth model, the Standards-Based Model like the Deficit Model, attempts to oversimplify education in an attempt to put sole responsibility on teacher effectiveness for the students' success (Kennedy, 2005). Kennedy (2005) cautions that increased standardization in the United States sacrifices the teaching possibilities and capabilities to compete in the global market to focus on accountability and pressures to conform.

The sixth model, the Coaching/Mentoring Model covers a variety of professional development practices. Key to this model is that professional development can occur within the school; teachers do not need to travel to receive professional development. This model is one-to-one where the two teachers can be colleagues, one can be more experienced than the other, or it may be hierarchical (Kennedy, 2005). Coaching and mentoring also ensures more active learning (Crawford, Schmeister, & Briggs, 2008). The coaching aspect focuses more on skills, while the mentoring aspect focuses on counseling. With both coaching and mentoring, the quality of interpersonal relationships is of utmost importance in this model (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Kennedy, 2005). It is believed that sharing dialogue with colleagues can improve the quality of the professional development (Akiba & Liang, 2016; Ball, 1996; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Kennedy, 2005; Wilson & Berne, 1999). Mellom, Straubhaar, Bladeras, Ariail, and Portes (2018) found that by training teachers face-to-face in instructional conversation pedagogy coupled with intensive coaching support throughout one year with monthly check-ups, teachers had a positive ideological shift in their attitudes towards diverse students. The week-long professional development focused on pedagogy and teachers participated in collaborative activities and discussions about linguistics, second language

acquisition, culturally responsive instruction, and contextualizing lessons for diverse learners. Likewise, Irby, Guerrero, Lara-Alecio, Tong, and Rodriguez (2012) found that when professional development integrated peer coaching, teachers implemented more what they learned at the professional development. In other studies where, professional developments did not incorporate peer coaching, only 10% of the teachers incorporated the strategies (Irby, Guerrero, Lara-Alecio, Tong, & Rodriguez, 2012).

Similarly, the seventh model, the Community of Practice Model also centers on interpersonal relationships. Research suggests that strong professional development communities contribute to school reform and instructional improvement (Akiba & Liang, 2016; Bechtel and O'Sullivan, 2006; Goddard, Goddard, & Tschennan-Moran, 2007; Koch & Appleton, 2007; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Lieberman & Miller, 2011; Little, 2002; Louis & Marks, 1998; Moolenaar, Sleegers, & Daly, 2012; Saunders, Goldenberg, & Gallimore, 2009). According to Kennedy (2005), this model follows the social theory of learning where learning occurs as a result of the interactions within the community and not planned courses. Emphasis is put on the quality of the connections among the members of the community (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012). Participants in a Community of Practice Model are aware of their participation within the learning community; however, their participation can be proactive or passive dependent upon the role of the dominant members of the group in shaping understanding of the community and its roles. Professional development communities can act as sites of transformation where individual knowledge and experience are enhanced collectively (Kennedy, 2005). Communities of practice can participate in action research, but it is not a requisite, and vice versa in action research it is not a requisite to collaborate as they do in Communities of Practice (Kennedy, 2005).

Collaboration does not need to be formal. Akiba and Liang (2016) found that informal communications had greater impact on student achievement than formal professional development activities. School culture, support from administration, and colleague support also play a major role in teacher change (Akiba & Liang, 2016; Little, 2002). Similarly, Crawford, Schmeister, and Briggs (2008) found that teacher collaboration resulted in positive outcomes for teachers. Some teachers even became mentors to colleagues and consulted informally. Support and collaboration not only should come from teacher colleagues, but it also needs to come from administration. Principals need to be involved with teachers during professional development programs if they want teachers to implement change in their classrooms successfully (Bechtel & O'Sullivan, 2006; Trehearn, 2010). Teachers that did not have collegial interactions and lacked support, did not effectuate change in their classrooms (Bechtel & O'Sullivan, 2006). The collegial support was key in influencing the teaching environment. Teachers in the process of change sought colleagues for new ideas, reassurance, tips, developing classroom management strategies, and developing, improving, and affirming their teaching skills (Bechtel & O'Sullivan, 2006; Scribner, 1999). Teachers working together were more likely to continue implementing the change originally introduced, had more positive views about professional development, were more willing to implement new ideas, revised existing ideas, and implemented more engaging experiences for their students (Bechtel and O'Sullivan, 2006; Goddard, Goddard, & Tschennan-Moran, 2007; Koch & Appleton, 2007; Lieberman & Miller, 2011; Louis & Marks, 1998; Moolenaar, Sleegers, & Daly, 2012; Saunders, Goldenberg, & Gallimore, 2009).

The eighth model, the Action Research Model is defined as "the study of a social situation, involving the participants themselves as researchers" (Kennedy, 2005, p. 245). It is collaboration among universities, government, and professional groups. The aim is that teachers

as researchers will produce research more relevant to practitioners. According to Irby, Guerrero, Lara-Alecio, Tong, and Rodriguez (2012) "Action Research, is a continuous process of planned inquiry to determine the effects of the implementation of an instructional practice on the outcomes of the students in a classroom" (p. 41), and it allows teachers to improve their own classroom situation by asking critical questions of their practice even though they may be limited by political boundaries (Kennedy, 2005). The collaboration among different entities may surface a number of different agendas, and the push towards teachers, as researchers, could be perceived as an attempt to weaken the universities' role as sole producers of research (Kennedy, 2005). Micro politics in schools can also have an effect on teacher change if the key player department heads do not find consensus (Bechtel & O'Sullivan, 2006). Even though Action Research is a more formal type of professional development, it can also function as informal professional development on a smaller scale. Teachers frequently rely on their own individual inquiry to develop content knowledge conducting individual inquiry from a variety of sources such as practitioner journals, magazines, newspapers, and classic literature (Scribner, 1999). The teacher is the decision maker, data collector, and information source situated within the classroom (Irby, Guerrero, Lara-Alecio, Tong, & Rodriguez, 2012). In their study with the ELLA-V project, Irby, Guerrero, Lara-Alecio, Tong, and Rodriguez, (2012) found that action research has significant effects on teachers' pedagogy practices and students' learning. Thus, Action Research has transformative potential, giving teachers autonomy and confidence as teachers engage in a more proactive role as opposed to the passive roles imposed on them through other professional development models.

Finally, The Transformative Model involves a series of processes and conditions from other previously mentioned models. It is only featured in small-scale research activities, but

increasingly featured in academic literature (Kennedy, 2005). For example, researchers have found that professional development is most effective if it is more formal in nature and it involves coherent, active learning with a focus on academic subject matter and practical classroom strategies targeting teachers' specific needs; it is sustained over a period of time and intensive rather than short-term; it provides teachers opportunities to engage in leadership roles; it involves the collective learning; and it is characterized by a reform rather than a traditional approach (Brand, 1998; Dash, Kramer, O'Dwyer, Masters, & Russel, 2012; McConnell, Parker, Eberhardt, Koehler, & Lundeberg, n.d.; Irby, Guerrero, Lara-Alecio, Tong, & Rodriguez, 2012;Torff & Sessions, 2008). Kennedy's nine models are not exhaustive; they simply suggest a way to categorize models of Continued Professional Development (CPD).

Summary

In this chapter, the history of professional development and the review of the literature help clarify the importance professional development in the school system. In this chapter, it is made clear the importance of professional development, the purpose, the cost associated with it, research-based successful practices including online and virtual professional development (VPD), and the difficulty with assessing professional development programs. The need to improve professional development practices arises from current implementation of programs where time and resources are not being utilized to obtain the most beneficial results. It is of paramount importance to take into consideration how teachers learn best, grow, and implement change by developing a strategic plan for the implementation of professional development. According to Cohen and Mehta (2014), a solution to the dilemma would be to create or adapt

more intermediary organizations that aid public schools' professional development efforts to improve instruction. The organizations could assist schools by providing materials, assessments, and training for teachers. The following chapter describes the methods and procedures of the present study. It includes research design, research questions, sample, data collection, data analysis, and reliability, validity, and credibility.

CHAPTER III

METHODOLOGY

In this chapter, the research methodology, methods, and materials for this study are explained. Information is provided on the selection of research settings and a rationale for their selection. Professional development is examined through interviews that serve as reflective narratives (Riessman, 2008). Narrative research captures the detailed stories or experiences of individuals (Creswell, 2013). Also included is a description of the methods used to collect and analyze the data. This multiple case study was guided by phenomenological inquiry approach (Creswell, 2013). According to Creswell (2013), "a phenomenological study describes the meaning for several individuals of their lived experiences" (p. 57). Since this study aimed at understanding the perceptions and experiences of teachers participating in professional development from their point of view, phenomenology was an ideal guiding framework because it is aims to understand phenomena from the actors' perspective (Creswell, 2013; Yin, 2014). This study seeks a greater understanding of teachers' perspectives regarding virtual professional development.

This study is part of a sustainability aspect of the virtual mentoring and coaching (VMC) for teachers participating in Project English Language & Literacy Acquisition — Validation (ELLA-V), a five-year, Investing in Innovation (i3) validation study on English language development in grades kindergarten through three.

Research Design

A purposeful sample of 22 current classroom teachers and five principals was gathered. Data were collected through extended interviews with the participants. A constant comparative data analysis method was used (Lincoln & Guba, 1985). Data were unitized, coded, grouped, categorized, and compared for patterns and emerging themes. This research design was qualitative in nature primarily relying on interview data, using observations and preexisting data to corroborate and challenge themes emerging from the interview data. Qualitative researchers seek to identify concepts and their relationships, and they are more interested in understanding what is going on, not in testing hypotheses (Corbin, & Strauss, 2008). The unit of analysis was the 'concept' (Corbin, & Strauss, 2008). Further, the research design for this study was a descriptive phenomenological multiple case study design (Flyvbjerg, 2011; Yin, 2014) because the purpose of the study was to build up a detailed picture of professional development practices implemented in the past year in four border town school districts with high populations of English learners (ELs) students from teachers and administrators' perspectives. A multiple case study was fitting for this study to provide an empirical view investigating a current phenomenon, professional development in education, in depth and within the real-world context, has many points of interest, relies on multiple sources, and benefits from past theoretical propositions (Stake, 2016; Yin, 2014). Also, a case study can provide insights into what types of professional developments teachers and administrators deem more successful for themselves and their students. Finally, a multiple case study design is used because it is considered more compelling and robust in that each case can be replicated (Stake, 2016; Yin, 2014). The multiple case study used interviews as reflective narratives (Oliver, 1997). In particular, the study focused on

teachers and administrators' perceptions of the impact that project English Language and Literacy Acquisition – Validation (ELLA-V) had on English acquisition for native Spanish-speaking students in kindergarten through third grade (Center for Research and Development in Dual Language and Literacy Acquisition, crdlla.tamu.edu).

Research Questions

3. To what degree did project ELLA-V impact English acquisition for native Spanish-speaking students in border communities in grades kindergarten through third grade based on teachers' perspectives?

1. What types of professional development do teachers and administrators perceive to have more impact on students, student learning, and student confidence?

2. To what extent does professional development impact student performance on state assessments?

Sample

Research participants were selected on the basis of prior participation in Project English Language and Literacy Acquisition – Validation (ELLA-V) in four school districts in border towns between Mexico and the United States with high populations of English learners (ELs). According to Yin (2014), the number of carefully selected participants allows for a theoretical or a literal replication and provides a compelling support of the initial set of propositions. A theoretical replication predicts contrasting results for anticipatable reasons, while a literal

replication predicts similar results (Yin, 2014). Out of a total of 28 teachers and 14 principals that participated in the program, 22 teachers and 5 principals responded and were interviewed. Three teachers and three principals from the original participants were no longer in their position at the times of the interviews. They had retired, moved, changed schools or position and no longer had the same contact information. Participation was voluntary. An email was sent to ask teachers and administrators to participate by scheduling an interview time. Participants were given a small snack and coffee at the time of the interview as an appreciation for their time. They were not advised prior to the meeting that they would receive any incentive.

Setting

The interviews took place in person at each participant's school in a lunchroom, the library, a conference room if one was available, or in their classroom. There was one interview that had to take place at the time the students were still in the classroom for dismissal. It was loud, but we had to make accommodations if we wanted the interview to take place because of teacher's scheduling restrictions. The four school districts are of particular interest because of their geographical position in border towns between Mexico and the United States. Two of the school districts are classified by Texas Education Agency (TEA) as Other Central City Suburban, one as Other Central City, and one as Independent Town. Three are independent school districts and one is a consolidated independent school district. These border towns have higher concentrated populations of Hispanics, English learners (ELs), and economically disadvantaged students than other districts in the rest of Texas and the United States (See Table 2.). Texas is the second state with the highest numbers of EL students with 16.8 percent; California is the first with 21 percent of EL students (U.S. Department of Education, 2018). In

2015, the United States had 4.8 million students (9.5 percent) identified as EL with 77.1 percent

of the EL population speaking Spanish at home (U.S. Department of Education, 2018). The

districts in this study have higher percentages of Hispanics than the state and country average.

Because of the high numbers of ELs in these districts it is crucial that teachers receive high

quality professional developments so that they are prepared to deliver high quality instruction in

academic language development and increase achievement levels for EL students (Tong, Luo,

Irby, Lara-Alecio, & Rivera, 2017). For instance, District 3 has 93 percent of Hispanics, the

lowest from the four districts (TEA Snapshot District Detail, 2016), while the Hispanic

population for the state is 52.4 percent (Texas Academic Performance Report, 2016-2017).

Similarly, District 2 has the highest percentage of EL students, 59.6 percent, while Texas has

18.9 percent (See Table 2.).

Table 2

District and State Percentages of Hispanic, EL, and Economically Disadvantaged Students

	District 1	District 2	District 3	District 4	Texas
Hispanics	99.6	98.6	93	98.7	52.4
ELs	48.7	59.6	17.5	39.5	18.9
Economically Disadvantaged	92.9	94.3	76.2	76.7	59
Bilingual / ESL Edu.	49.1	59.5	16.5	42.8	18.8

Adapted from "Snapshot District Detail 2016." In *Texas Education Agency web page*. Retrieved
October 16, 2018 from https://rptsvr1.tea.texas.gov/perfreport/snapshot/2016/district.srch.html
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Even more significant is the teacher demographics and the ratio of teachers that serve Bilingual/ESL Education (See Table 3.). The majority of teachers in the 14 schools are female (average 85.9 percent), very few have a master's degree (average 14.4 percent), the majority of teachers have between 11 and 20 years of experience (average 35.9 percent), and unlike findings from current literature, the majority of the teachers are Hispanic (average 96.8 percent) (Mellom, Straubhaar, Bladeras, Ariail, & Portes, 2018; Molle, 2013; Tanguay, Bhatnagar, Barker & Many, 2018; Texas Academic Performance Report, 2016-2017). The participants that were interviewed for the current study resemble the general 14 schools' gender demographics. From the 22 participants interviewed, three were male and 19 were female (86.4 percent female teachers). The majority of students and teachers in all the schools in this study are identified as Hispanic. For instance, nine out of the 14 schools have 99 percent or higher Hispanic student population (See Table 3.). Only one or two students are identified as White in these nine schools. Furthermore, six of the nine schools with the highest Hispanic student population have 100 percent Hispanic teachers, while the other three have 95.1, 95.2, and 97.6 percent Hispanic teachers. Also significant is the number of teachers and students in the Bilingual/ESL program. According to the Texas Education Agency's (TEA) Texas Academic Performance Report State Profile (TPRS) (2016-2017), for instance, school 1-A has 490 (69.4 percent) students in the Bilingual/ESL Education program and only 3.4 (8.8 percent) teachers in Bilingual/ESL Education program; school 2-B has 464 (71.9 percent) students in the Bilingual/ESL Education program and only 4.7 (13 percent) teachers in Bilingual/ESL Education program; school 3-B has the lowest number of students in the Bilingual/ESL Education program with only 173 (29.9 percent) and the greatest number of teachers in Bilingual/ESL Education program with 12.7 (31.5 percent); and school 4-B has the greatest number of students in the Bilingual/ESL

Education program with 497 students (70.5 percent) and the lowest number of teachers in

Bilingual/ESL Education program with only 2.3 teachers (5.4 percent). The percentage of

teachers in Bilingual/ESL programs is even lower for the state; only 6 percent of teachers are in

Bilingual/ESL programs (Texas Academic Performance Report State Profile, 2016-2017).

Table 3

School Percentages of Hispanic Teachers, Students, and Percentages of Participation in

Bilingual/ESL Education

	Hispanic Students	Hispanic Teachers	Students in Bilingual/ESL	Teachers in Bilingual/ESL
School 1-A	99.9	100	69.4	8.8
School 1-B	100	100	78	9.8
School 1-C	99.7	100	84	15.9
School 1-D	99.7	95.1	69	14.9
School 2-A	99.7	100	81.4	22.2
School 2-B	97.7	97.2	71.9	13
School 2-C	99.6	100	75	14.2
School 2-D	95	92.7	67.2	18.2
School 2-E	98.7	100	75	17.5
School 2-F	99.6	100	74.8	24.9
School 3-A*	93.8	87.9	25	25.5
School 3-B*	90.3	88.9	29.9	31.5
School 4-A	100	95.2	72.9	6.1
School 4-B	99.4	97.6	70.5	5.4

Finally, Tables 4, 5, and 6 show the performance on the state assessment prior to and after the ELLA-V intervention. The achievement gaps mentioned in the literature between Hispanic English Learners (ELs) and their White native English-speaking counterparts are evident (Korte, 2015; Smith, 2014; Tong, Luo, Irby, Lara-Alecio, & Rivera, 2017). For example, even though Hispanics improved in the reading from 2013 to 2017, only school 3-A fared better than the White group in 2017. Similarly, ELs improved in reading from 2013 to 2017, but they are still lagging behind the non-EL students with only four schools (1-A, 1-C, 2-C, and 2-D) doing better than their non-EL counterparts (See Table 4.).

Table 4

Third Grade Reading STAAR Performance Results in Spring 2013 Pre ELLA-V Intervention and

in Spring 2017 Post ELLA-V Intervention

| | % Hispanic Stu. | | % White Stu. | | % EL Students | | % Non EL Stu. | |
	Pre 2013	Post 2017	Pre 2013	Post 2017	Pre 2013	Post 2017	Pre 2013	Post 2017
School 1-A	54	72	89	81	50**	74	65	68
School 1-B	47	41	89	81	*	20	63	70
School 1-C	58	59	89	81	30**	59	73	55
School 1-D	44	53	89	81	38**	45	60	67
School 2-A	50	77	89	81	44	75	63	82
School 2-B	94	79	89	81	-	75	89	100
School 2-C	68	79	89	81	47	80	73	58
School 2-D	38	75	89	81	38**	76	57	65
School 2-E	42	62	89	81	35	54	55	67
School 2-F	52	66	89	81	48	60	*	69
School 3-A	77	86	87	86	*	31	83	69
School 3-B	88	69	87	77	*	38	86	85
School 4-A	66	66	89	81	*	59	65	65
School 4-B	61	53	89	81	*	39	75	73
State	76	68	89	83	54	65	82	n/a

Note. Data for the White Students in each school is from the region data because there is zero observations reported for each school and each district.
- Dashes indicate zero observations reported for this group.
* Indicates results are masked due to small numbers to protect student confidentiality.
** Data is from 2012 because data was unavailable from 2013.
Adapted from "Texas Performance Reporting System 2013." In *Texas Education Agency web page*. Retrieved November 5, 2018 from https://tea.texas.gov/tprs.aspx
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Even though ELLA-V interventions focused on reading and science, mathematics STAAR results are also included because if students' English language improves, not only will they benefit in reading and science, but in all subjects. All schools' Hispanic students improved from 2013 to 2017 in mathematics except two schools (3-A and 3-B) (See Table 5.). Similar to the reading results, although students improved in math, all schools except three (2-B, 2-D, and 2-F) fell behind the White population in 2017. Results from the fifth-grade science STAAR results vary for the Hispanic group. Six schools did not show improvement from 2013 to 2017 (See Table 6.). In the Hispanic group, only two schools scored higher than the White group. On the other hand, the EL group in all schools showed substantial improvement from 2013 to 2017 except School 4-A. Despite the substantial gains, the EL group still lagged behind the non-EL group (See Table 6.). The low percentages of Hispanic and EL students at or above grade level, the gaps between the Hispanic and White groups, and the gaps between the EL and non-EL groups is why this research is needed to understand and improve professional development practices in order to equip teachers' to better serve the Hispanic and EL populations.

Table 5

Third Grade Mathematics STAAR Performance Results in Spring 2013 Pre ELLA-V Intervention

and in Spring 2017 Post ELLA-V Intervention

| | % Hispanic Stu. | | % White Stu. | | % EL Students | | % Non EL Stu. | |
	Pre 2013	Post 2017	Pre 2013	Post 2017	Pre 2013	Post 2017	Pre 2013	Post 2017
School 1-A	46	80	83	85	33	78	50	87
School 1-B	53	61	83	85	41	52	63	70
School 1-C	63	67	83	85	50	69	69	45
School 1-D	36	73	83	85	*	74	40	61
School 2-A	54	80	83	85	50	78	63	91
School 2-B	72	86	83	85	-	84	67	90
School 2-C	53	78	83	85	33	80	45	58
School 2-D	38	88	83	85	31**	87	38	91
School 2-E	45	66	83	85	45	59	45	67
School 2-F	62	92	83	85	61	91	*	88
School 3-A	77	72	76	80	*	59	83	75
School 3-B	90	65	76	80	*	38	92	78
School 4-A	64	73	83	85	38**	68	61	70
School 4-B	65	74	83	85	*	63	75	93
State	66	75	80	75	51	75	71	n/a

Note. Data for the White Students in each school is from the region data because there are zero observations reported for each school and each district.
- Dashes indicate zero observations reported for this group.
* Indicates results are masked due to small numbers to protect student confidentiality.
** Data is from 2012 because data was unavailable from 2013.
Adapted from "Texas Performance Reporting System 2013." In *Texas Education Agency web page*. Retrieved November 5, 2018 from https://tea.texas.gov/tprs.aspx
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Table 6

Fifth Grade Science STAAR Performance Results in Spring 2013 Pre ELLA-V Intervention and

in Spring 2017 Post ELLA-V Intervention

	% Hispanic Stu.		% White Stu.		% EL Students		% Non EL Stu.	
	Pre 2013	Post 2017	Pre 2013	Post 2017	Pre 2013	Post 2017	Pre 2013	Post 2017
School 1-A	63	84	87	85	50	80	79	90
School 1-B	62	59	87	85	47	63	78	*
School 1-C	56	54	87	85	44	49	70	67
School 1-D	69	61	87	85	54	57	89	66
School 2-A	58	83	87	85	58	81	76***	100
School 2-B	46	93	87	85	39	89	76***	100
School 2-C	49	76	87	85	50	69	43	90
School 2-D	50	79	87	85	22	76	85	82
School 2-E	58	63	87	85	33	44	88	71
School 2-F	86	98	87	85	84	96	100	100
School 3-A	63	82	80	79	*	*	69	87
School 3-B	73	66	80	79	*	53	81	69
School 4-A	64	60	87	85	54	44	76	74
School 4-B	68	66	87	85	52	61	84	89
State	67	69	85	85	54	58	76	n/a

Note. Data for the White Students in each school is from the region data because there are zero observations reported for each school and each district.
- Dashes indicate zero observations reported for this group.
* Indicates results are masked due to small numbers to protect student confidentiality.
** Data is from 2012 because data was unavailable from 2013.
*** Data is from district because campus data was either masked or zero observations reported.
Adapted from "Texas Performance Reporting System 2013." In *Texas Education Agency web page*. Retrieved November 5, 2018 from https://tea.texas.gov/tprs.aspx
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Procedure

The teachers that participated in the interviews were part of project ELLA-V. All teachers participated in the program the year prior to the interview. Some teachers continued to be in the program. The year-long program consisted of providing teachers lesson plans and strategies to teach Spanish-speaking students English language and literacy skills. The teachers received support in the form of professional development once in person prior to the beginning of the academic year. In this meeting, the teachers were introduced to the program, they were provided with the scripts, lesson plans, materials, and strategies. The script was word for word what the teachers should say during the lesson and they were provided with all the materials necessary for the lesson. As part of the Virtual Mentoring and Coaching (VMC) component of Project ELLA-V, participants further received professional development support once a week through virtual Webinar meetings. In the Webinars, ELLA-V mentors provide teachers with virtual professional development (VPD) on English as a second language (ESL) strategies and instructional techniques to complement a curriculum designed to improve English academic language for English learners (ELs). In the Webinars, participants were also able to interact with other teachers in various cities also participating in the program. The lesson for the week was discussed, participants were able to ask questions, and exchange ideas about how to implement the lesson. The participants were provided with a camera placed in their classroom that was to be on at all times. However, the camera could be covered, except for the days of their scheduled VMC sessions where a mentor observed and recorded the lesson. Further, teachers had one to two 20-minute observations with real-time virtual coaching. A mentor observed classroom activity and instruction through the camera and a wireless microphone and an earbud worn by

the teacher. Teachers were able to received immediate feedback as they were teaching the lesson. Mentors were continuously ensuring that the participants were implementing the strategies, following the curriculum presented in VPD, and provided continuous feedback.

Data Collection

The execution of data collection required careful planning. to address the research questions This including scripting detailed open-ended questions, being prepared for the interviews with necessary materials such as notebooks, pencils, a copy of the interview protocol for the participants, informed consents, voice recorder for backup, and keeping the case study report in mind for the desired end result. In-depth and open-ended questions were used to understand teachers' perspectives on their work and professional development experiences. Interviews were conducted over a period of four months depending on teacher and principal availability, copious notes were taken, they were recorded with participant permission, the recordings were then used to transcribe the interviews and observations were made by the researcher.

Participants were interviewed (see Appendix) face-to-face for approximately 30 to 45 minutes because of time constraints in teachers' schedules. The interviews were comprised of a 19-item checklist of strategies to see which the teachers continue to implement in their classrooms and seven open ended questions. Data collection took place using good listening skills taking in large amount of new information without bias and staying flexible to the demands of the study (Yin, 2014). The participants were notified of the researchers position as an employee of Texas A&M University ELLA-V Project. Stake (1995) suggests that we cannot

observe everything, thus we rely on others' observations, which we come to learn through interviews. Thus, through interviews, descriptions and interpretations of participants was gathered focusing on their meaning. The setting is described where the activity occurred as a story narrative in order to complete the story (Stake, 1995). Accounts were reconstructed and will be submitted to the participants for accuracy and stylistic improvement (Stake, 1995). Finally, the participants will be debriefed and feedback will be obtained from participants for accuracy, redefine issues, gather additional data, and triangulate to validate key observations (Stake, 1995).

Data Analysis

Interviews and data were assembled into a database, coded, and a chain of evidence maintained to increase reliability of the case study (Yin, 2014). Interviews were audio recorded with participant permission and transcribed verbatim. Analysis of data began with the transcriptions. Transcripts were coded to find relationships and patterns to fit into themes and categories (Saldaña, 2016). In this qualitative analysis, the codes were researcher-generated. According to Saldaña (2016), "coding is not a precise science; it is an interpretive act" that symbolizes or translates data (p.5). In analyzing data, raw data was analyzed under varying interpretations, searched for patterns of data, draw tentative conclusions, possibly gather new data, organize according to issues, deliberately seek disconfirmation of findings, and prepare the final report. Reports and materials were drafted, revised, and reproduced for audience use to help the reader determine what is typical and relevant for generalization (Stake, 1995). I strived to find relationships in the types of professional developments and what teachers and administrators

deem worthy to tell a story and describe the case as detailed as possible to reveal a uniquely complex case.

To analyze the data, different approaches were explored. Notes were taken, searched for patterns, insights, and concepts. Yin (2014) and Saldaña (2016) also recommends putting information into different arrays, making a matrix of categories, creating data displays, tabulating frequency of events, and putting information in chronological order. The data was analyzed using a phenomenological inquiry approach (Creswell, 2013). The data was analyzed and developed as a description of the current professional development practices using the constant comparative method of data analysis (Creswell, 2013). Open coding is first used for major categories of information; then, axial coding emerges to identify one open coding category to focus on, the "core" phenomenon. Finally, the data is reanalyzed to create categories around this core phenomenon (Creswell, 2013). If plausible rival explanations arise during the data collection, then these were analyzed as such (Yin, 2014).

Reliability, Validity, and Credibility

To maintain reliability of the study, participants were clearly informed from the onset of the email contact of the researcher's position as an employee of the Texas A&M University System Project English Language and Literacy Acquisition – Validation (ELLA-V). In order to investigate teacher and administrators' point of view, protecting the participants was key. Teachers especially needed to feel protected in that they can express their opinions without worrying about reprisal. The credibility of the study was established by using multiple sources of evidence from a multiple case study. Source and data triangulation were used to establish

credibility. Furthermore, member checking was available for participants to review the case study report draft for accuracy. Besides reading the case study report, participants and readers can inspect and have access to the case study database, which increases the reliability of the case study. The database includes field notes, transcribed interviews, documents, surveys, other quantitative data, memos, and index cards. For the reliability of the study, procedures were documented in detail "…as if someone was looking over your shoulder" (Yin, 2014, p.47).

Summary

In conclusion, in this chapter the methodology for the research design was discussed, participant sample population, data collection, analysis, reliability, validity, and credibility. This chapter situated the study within the framework of a multiple case study phenomenological inquiry. Interview narratives were used to explore the sense making of teachers and administrators about the impact that project English Language and Literacy Acquisition – Validation (ELLA-V) had on English language acquisition among native Spanish-speaking students in kindergarten through third grade. Further, project ELLA-V was discussed to see which programs teachers and administrators believed to be more beneficial for them and their students. The analysis from the interviews is examined in the next chapter.

CHAPTER IV

DATA ANALYSIS AND FINDINGS

In Chapter IV I will discuss the findings of the case studies, I include a description of the

data analysis process and organize the data into themes and sub themes that emerged from the

interviews. The results from the data contribute to answering the overarching research questions:

1. To what extent does virtual professional development impact teacher and student

performance?

2. To what degree did Project ELLA-V impact English acquisition for native Spanish-

speaking students in border communities in grades kindergarten through third grade

based on teachers' perspectives?

3. What types of professional development do teachers and administrators perceive to

have more impact on teachers, students, student learning, and student confidence?

A summary of significant findings concludes this chapter.

Data Analysis

The data used for this study was taken from Project English Language and Literacy

Acquisition – Validations (ELLA-V) from the Center for Research and Development in Dual

Language and Literacy Acquisition (i3-U.S. Department of Education; Grant Award No.

U411B120047). I used a naturalistic inquiry approach with open-ended interview questions. The

data were analyzed by hand. I analyzed all the interviews, coded them, and constructed a matrix

of the comments and themes that surfaced on repeated occasions. I also included an enumerative

system stemming from the matrix. The enumerative system consisted of frequency counts of comments from the participants. Although this type of data processing may be peripheral to the qualitative study, it does complement it (Lincoln & Guba, 1985). Seidman (2013) stresses the importance of letting the themes develop "from the experience of the participants as represented in the interviews" (p. 130). The interview questions focused on the participants' experiences with virtual professional development (VPD), coaching, mentoring. Additional themes and subthemes emerged from the experience of the participants. Following is a table of the themes and subthemes that emerged from the interviews:

Table 7

Themes and Subthemes

Theme	Subthemes
1. Streamlining Professional Development	Flexible Time Effective Cost Effective
2. Challenges and Opportunities in the Adaptation of Virtual Professional Support	Change is difficult. VPD presents technical difficulties
3. VPD Promotes and Facilitates Learning Communities in Schools and with Remote Sites	Online In person (program participants and non program participants) Cooperative learning Interactive learning Exchange of ideas and materials Modeling
4. Increased teacher confidence	
5. Encourages teacher reflection	
6. Commitment to Fidelity of Implementation	Consistency Sustainability
7. Linking Professional Development to Student Outcomes	Academic Improvements: English learner (EL) students were able to transition to all English Increase English language usage and vocabulary Increased in English reading Personal Improvements: Increased self confidence
8. Knowledge Gained from Professional Development Highly Transferrable	To other Subjects To other grade levels
9. Teachers as Critical Consumers of Professional Development	Length of professional developments Accountability Teacher participation Teacher attitudes Teacher input

The participants described their experiences about the implementation of the ELLA-V virtual professional development (VPD) program and told how those experiences impacted them and their students. They learned from the hands-on experience of a long term VPD. Participants felt the long-term aspect of virtual professional development program better prepared them and their students. They were exposed to a research-based approach, effective quality instruction techniques, technology, multiple strategies, materials, and lessons. Through webinars, the participants learned from other teachers and mentors in different cities. They learned to collaborate, reflect in their practice, better prepare English learners (ELs), and integrate subjects through effective lessons. According to the participants, they felt "blessed," "honored," "proud," and "at an advantage" for having been chosen to participate in the program. After participating in the VPD program, teachers said they felt "more confident" and "empowered." The VPD program allowed them to experience more effective teaching strategies for EL students, experience collaboration with other teachers and mentors through VPD, and better understand their students. As a result, teachers felt better prepared to teach their EL students, to continue implementing the strategies learned, and saw improvements in their students' academics, self-confidence, and English acquisition.

School Settings and Participant Profiles

The timing of data collection had to be flexible and take into consideration teachers' busy schedules. The interviews took place at times the participants were available. Interviews were 20 minutes to an hour in length. In some instances, the interviews had to be cut short because of schedule changes or because a substitute or teacher aid were unavailable and the students could

not be left unattended. The interviews also took place wherever there was space available in the participants' schools. Some interviews took place in private and quiet spaces such as classrooms with no students present, principal's offices, and conference rooms. Other interviews took place in areas with noise, distractions, and constant interruptions such as in teacher lunchrooms where other teachers were constantly coming in and out to prepare their food, making noise with the microwave, and workrooms where teachers were coming in and out to get supplies and make copies or pick up printouts. Additional interviews took place in classrooms when students were present with either a teacher aid, at the time of dismissal, or in conference rooms where students were walking in and out to put on vests to perform duties in the cafeteria and hallways. Even though one of the interviews was conducted with students present in the classroom with a teacher aid, they were completely on task, following instructions, and spoke only in whispers.

On the other hand, one of the most distracting interviews took place during afternoon dismissal at the end of the school day. Even for the interviews time was a luxury. One of the interviews had to be done close to the end of the school day. The teacher did not have a substitute or an aid for the duration of the interview, but the participant was nonetheless very willing and kind to meet with me. The students were on the carpet watching loud English educational videos, waiting for their busses to be called. It was very distracting with the video, the loud children, the teacher redirecting the students or communicating with them information about their dismissal, and the school speaker constantly bursting with general information and calling bus numbers.

During two interviews, there were many instances of code switching for informal communication with the students present. During one of those two interviews, students present in the classroom spoke Spanish with the teacher and teacher also responded in Spanish. (1-C) The

interview was conducted almost entirely in Spanish with high instances of code switching. Code switching occurs frequently in bilingual students. Many times, teachers have to adapt to their students because many feel more comfortable with their native language or they have yet to learn to speak English. For example, one participant (1D-t2) reminisced about their experiences growing up and coming to the United States in second grade not knowing any English:

> (1D-t2) I know being as in the same situation as the students because you know I came to school when I was in second grade. I didn't know anything (emphasis added on 'anything') they were talking about. Like for as easy as you think what they are saying is. I mean I remember one of the kids told me something about me being their friend, like "you are my friend," and I was like I had no clue. And you would think it's something really easy and it's not. And a teacher there, her name was Ms. White, and I could not understand why her name was Ms. White because white is a color, and like why, why is that her name?

In addition, teachers many times go through and have to overcome difficulties personally or professionally. For instance, one participant (1-C) was recovering from a recent accident. The participant broke a wrist at work, had been in the hospital, and had just returned to the classroom. As a result of the interview data nine themes emerged. They are not arranged in order of importance. All themes are related and at times difficult to separate. I will discuss the themes in the following sections.

Theme One: Streamlining Professional Development

The first theme that I will discuss is that of the benefits of virtual professional development (VPD). Subthemes that emerged are that of flexibility, time, and cost effective. This theme answers research question one. Research question one was: To what extent does virtual professional development impact teacher and student performance? Theme one focuses on the impact on teacher performance. Professional development (PD) is vital for teachers and administrators to be current on the latest education trends and to continuously grow as professionals to positively impact students. However, according to participant 1B-t2 professional development at times is too costly and time consuming. In some cases, teachers even have to pay for PD out of pocket or cannot attend trainings during school hours. One participant said the following about the flexibility of virtual professional developments:

> (3A-p) I like flexible professional developments because I know what I need versus sometimes I sit at a training thinking I got like 10 minutes out of that. But then I also like it in different methods, I like to see videos, I like to read books, but I want to do that on my time, you know, do a book study kind of things. And sometimes sitting in a room with people, there are distractions that we don't really need to have.

Thus, virtual professional development (VPD) is a time and cost-effective alternative to traditional professional developments. Administrators, teachers, and coaches save travel time and costs because VPD can occur anywhere there is a computer with Internet connection. One participant commented on saving time with virtual meetings. Following is their direct quote:

(2B-t2, p5) That would be good. Like sometimes there's not enough time, you

can't go to a meeting or sometimes the drive time, or you lose time doing that. I

know some teachers have to rush (emphasis added on 'rush') after school to get to

a meeting. With virtual, you kind of take your time, you have everything set up

and you're right there. You pretty much can do it anywhere depending on what

type the meeting or what things you would need. It is more convenient. Cut down

on travel time.

Another participant's direct quote follows regarding the cost and difficulty of attending trainings

during the academic year:

(1B-t2) It's usually those trainings that they have out of city that we have to input

our own money for it, or sometimes it's time during our school hours, so it's very

difficult for us to attend because it is during our working time. They are really

good about giving us a lot of trainings during the summer.

Further, a different participant said the following regarding time and not being restricted to a 45-

minute planning period block:

(2A-t1) And then, having the training online, like you weren't limited, like we

were limited on time, but you weren't restricted to just the 45 minutes in school in

the planning period that we have because some people are running late, I mean

there are a bunch of excuses, and we have a set time and sometimes we would be

under, sometimes we would go over, it just depends on the lesson, but I think that

sharing community was a very good idea, we liked it. You don't just go sit at a

cold library and listen to a person talk, lecture you half a day.

Even though virtual and online trainings are more flexible, and save more time than traditional professional developments, teachers are still pressed for time to comply with all the requirements from school and daily life. For example, 12 of the 27 participants said that they do not continue to use ELLA-Virsity. ELLA-Virsity as part of the ELLA-V virtual professional development program. It is a set of research-based online professional learning training sessions directed toward educators working with English learners (ELs). Five participants said they were not aware of the ELLA-Virsity existence, and 11 of the 27 participants said that they would participate if they had the time or if participation counted toward their professional development hours required by the Texas Education Agency (TEA) for recertification. One participant said the following regarding the use of the program's ELLA-Virsity. (1-C) "I would participate in the online trainings… I have to keep up with all the lesson plans, all the grades, you know, everything that is demanded, but I would, I would."

Virtual professional development (VPD) also gives greater flexibility to make observations because they can be done through a video camera. Immediate feedback can be offered either in real-time through the use of audio and ear buds or right after the observation via Webinars. Thus, making it flexible as to when the coach made the observations and cutting travel time and costs for the coach. One participant's direct quote follows regarding flexible professional development, feedback, and individualized professional development, coaching, and mentoring:

> (1-C t2) If the coach felt like you needed more help, parece que si les mandaban y
>
> les decian, bueno, tal dia prende la desta. Bueno, la desta siempre estaba prendida,
>
> pero que te pusieras el microfono y luego ya nada mas tantito querian ver como
>
> ibas implementando lo que te estaban dando, lo del binder. [Translation: If the

coach felt like you needed more help, I think they would tell them for a certain

day to turn it on. Well, it was always on, but for the teacher to put on the

microphone, and then they just wanted to see a little bit how you were

implementing the material that they were giving you from the binder.]

Therefore, even though participants are still pressed for time, virtual professional

development (VPD) greatly alleviates time restrictions to allow for professional developments

and observations to take place. Also, VPD gives access to a greater array of professional

developments around the world that would not be accessible otherwise to participants because of

expensive travel costs and time constraints. VPDs impact teacher performance by providing a

more flexible, time- and cost-effective alternative. Teachers are exposed to a greater variety of

research-based professional developments to be able to provide effective high-quality

instruction.

Furthermore, 13 of the 27 participants said they enjoyed virtual professional

development's (VPD) online meetings or Webinars. Participant comments regarding VPD's

Webinars included that they enjoyed sharing, collaboration, exchange of ideas, and flexible time.

Also, 14 of the 22 teacher responses said they felt comfortable using the bug in the ear during

virtual real-time coaching. Virtual real-time coaching makes it possible to provide feedback as

the teacher is delivering the lesson. One administrator, however, was not aware of the bug in the

ear for real-time coaching and feedback. The following is a direct quote from the principal

regarding the bug in the ear: (2B-p) "I was not aware of that. I wish I had a bug in the ear for all

of them. (Laughs.) I can do that? Excuse me. That's so awesome!" Finally, the technology not

only helped the teachers, but it also helped the students by exposing them to more technology.

One participant said the following regarding the positive aspects of having more technology

present in the classroom: (4A-p) "I know the recordings that they did and stuff like that helped the teachers integrate more technology into the classroom and at the same time the children experienced the technology aspect of the learning that the ELLA-V program brought." Another participant talked about the importance of immediate feedback and the benefits of real-time coaching from the administrator's perspective. Their direct quote follows:

> 3A-p I think that would be pretty cool because [otherwise] I would talk to you later in the day or the next day [about what I observed and] there's the "Oh, I don't remember saying that." And if you have the real time coaching, you are saying it right now, "don't say it that way, say this." So, I think it would be crazy beneficial to all of our teachers.

A different participant talked about how being videotaped encouraged their students to do their best in the classroom:

> (1B-t2) Like when we were being videotaped and we knew it that we were being videotaped, they would go out of their way to look at the camera. It was just funny the way they would act in front of the camera. And they made it a point to say even their sentences, they would say it as correct as they could say it, but they would really at least try (emphasis added on 'try') to say it only because they knew and they thought "Ah maybe somebody is going to look at us."

As is evident from the data, virtual professional development has many benefits such as time and cost effectiveness. Nonetheless, teachers, administrators, and mentors had to adapt to new technology and new methods of professional development delivery, observations, coaching, and mentoring such as the bug in the ear. The following theme explains the experiences of the participants' adaptation to such technology.

Theme Two: Challenges and Opportunities in the Adaptation
of Virtual Professional Development

Even though virtual professional development (VPD) presents many advantages to participants, they still had to adapt to technology and the virtual aspects of the professional development, mentoring, and coaching. The second theme that emerged from the data was that of overcoming setbacks or difficulties adapting to technology and the virtual aspects of the professional development program. Initially, some participants had trouble adapting to the program, the technology, having a video camera in the classroom at all times, being observed and videotaped, and having a person speak into their ear in real time while they taught a lesson. However, participants appreciated the immediate feedback that was provided by their mentor and felt it helped them reflect and grow in their teaching, and it helped them improve in their ability to better serve their English learners (ELs). Eight participants said "there is always room for growth." Even the mentors had to adapt to the virtual components. Following is a quote from Jennifer Alexander, a teacher mentor from the ELLA-V program:

> I adapted my training style to this medium. For one, I was keenly aware of my voice and how I provided feedback…. During the trainings, I reminded teachers that this was a long-term endeavor and that it was not expected that they would be perfect at the start, but they would develop their teaching skills with regard to second language instruction. (Texas A&M Today, 2018, ¶ 11)

Four of the 27 participants mentioned specifically that change was difficult at first. One of the participants said the following regarding change: (1D-t2) "But I feel like change is something that not everyone is ok with. I mean I think like they say that 'change hurts.'"

Furthermore, an administrator commented the following regarding teachers' resistance to change:

> (3A-p, p11) Not really. It goes back to this is a very high performing school, five-star distinctions in STAAR, so you know they are kind of sitting back thinking, "We're kind of awesome, like why do we have to change?" And they have a new principal, so they are kind of weighing it, thinking, "I don't know about you yet." Ok, fair enough, so baby steps.

A different participant commented that they were very nervous at first. Following is their direct quote: (4B-t1, p7) "At the beginning I was very nervous that I was chosen for this program, but then in the end I felt so blessed, so (emphasis added on 'so') blessed for these kiddoes." Similarly, another participant said the following about initial perceptions about the program:

> (2B-t2, p7) And this year, when they first contacted us, there were several that kind of no one kind of wanted to do it because they thought "oh no, it's a lot of extra work." And I told them, no, you'll learn a lot from it.... So they got a teacher to volunteer this year… and I'm like the veteran doing it and I can mentor.

As is evident from the data, most participants adapted to the virtual aspects of professional development. Thirteen of the 27 participants even said they enjoyed the virtual side of the professional development. Nonetheless, five participants said they did not like the virtual aspect of professional developments and coaching (2B-p, 3A-t1, 3B-t1, 2B-t2, and 2E-t2). Following is a direct quote from one of the administrator's perception regarding the online component of the program:

> (2B-p, Q1p2) I've heard nothing but good comments from the teachers. They've liked it. They enjoy it. The children like it. The part that they don't like is the part

where they have to be going online where they have to do the extra pero pues

[Translation: but] I suppose it comes with the that's why they are getting paid…

Like ourselves, we have a lot of Webinars… but there's nothing like that being…

maybe because I'm older. That personal touch where I can actually see you and

talk to you versus turn off the microphone because we can't listen to what region

20 is asking y luego [Translation: and then] there's side bar conversations and

they forget to turn off. I don't know. I personally prefer the actual personal touch.

Another participant, quoted below, expresses preference towards in-person trainings and

meetings as opposed to online: (3A-t1) "So and it was the first and last time that I saw somebody

actually. And the rest were online, which it's ok, but I'm more of a visual person. I'm kinder, I

have to see it." In addition, a different participant stated that while they liked the program, they

expressed their dislike with the real-time virtual coaching:

> (3B-t1, Q4p1) Bug in the ear… Yes, it was horrible. I was trying to listen and I
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> was trying to focus on my kids and I was trying to listen and I'm trying to take the
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> advice, but at the same time there was a camera. It was uncomfortable. For me, it
>
> was uncomfortable. It made me extremely self-conscious. On the days that I was
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> just being recorded, it was uncomfortable being recorded. I was self-conscious
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> about the camera and the behavior and what are you doing. You know, so many
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> things. But the bug in the ear, I didn't feel like I could really focus on what I was
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> doing because I was like ok, I'm doing something wrong. And I just, I'm very
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> negative, I'm very hard on myself, so it was just like, I wasn't taking it as advice.
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> I was thinking, ok, I just totally ruined that. I did it so wrong they are having to
>
> talk to me through a bug in the ear. No, I did not enjoy the bug in the ear.

Similarly, another participant said the following on the difficulty of using the bug in the ear because it is distracting:

(2B-t2) It was (extended expression of 'was' as if the participant was doubtful or questioning) helpful, I guess, I get nervous…. I guess it was pretty good because if they see anything, they guide you. The year that I did it, they said that I was doing good, so I didn't have too many pointers…. I don't know because to me it would feel like I keep getting interrupted. And if someone is talking to me, I tend to lose my train of thought of what I'm doing, so I think that that would be the negative side. I think it would distract the teacher from their teaching. It could be helpful at times, but it also can be distracting. Yeah, it's hard for me because if someone is talking to me and then I lose track, what was I going to say? I was going to do something.

Another participant commented how they liked virtual professional developments, but had trouble with screen time: (2E-t2) "I do like them, but sometimes because of my glasses, I get my eyes tired. And usually we use the computer all day, grades, attendance, everything. So, my eyes, they hurt me a little bit."

Even though the professional development program offered immediate feedback to the teachers through Webinars and real-time coaching, feedback on the students' progress was lacking. Two participants said that they never received results from the students' assessments at the beginning and end of the program. One participant said the following regarding student performance feedback: (2B-p) "I wish, like I said, that I could see some feedback so I can see how it has helped my children but they have never given us any." Another participant said the

following regarding missing feedback on students' progress from the beginning to the end of the program implementation:

> (3A-t1, p2) I never got feedback. They tested them at the beginning of the year, last year, and then they tested them at the end, and I never got feedback. I wanted to know, I don't know, did my students have a growth or not, I've always wondered because they never gave me feedback on that. Uh mh, yes (emphasis added on 'yes'), and I want to know because we sent. We had videos, we had to turn in videos, I think we had to turn in two, to pick a student, or a group of students, and I picked on one because she had a lot (emphasis added on 'lot' with extended expression), I mean from the beginning of the year to the end of the year, Oh my God! That child grew a lot! And I decided to pick her, and I sent everything, but I never heard any feedback on it or anything. If they liked it, you know, I just sent all the information that was asked.

Consequently, it is evident from participants' data the importance of feedback in order for teachers and students to have continued, long-term growth.

Theme Three: VPD Promotes and Facilitates Learning Communities in Schools and with Remote Sites

The third theme that emerged from the interview data is that of teacher collaboration. Teachers increased collaboration with other teachers in remote sites through virtual professional developments (VPD) and Webinars, and they also increased collaboration with their peers in their schools both in the program and those not participating in the program. Of the 27

participants, 17 mentioned that they share the ELLA-V program with their colleagues. Twenty-five of the 27 participants had positive comments about virtual professional developments' cooperative learning, interactive learning, teachers exchanging ideas, and modeling for colleagues. One participant stated that (1C-t1, p5) virtual professional development is conducive of collaboration among teachers. It also allows for teachers to exchange ideas, learn different ways in which one lesson can be taught, and even observe how other teachers teach the lesson. The following is a direct quote from one of the participants regarding sharing at the online meetings:

> (3B-t1, p9) We share so much! There are some teachers that don't want to share their ideas. They are like "this is mine!" It's just like a nice little community where everyone was working for the same goal and pretty much everyone had positive feedback.

A different participant likewise expressed positive feelings about collaborating with colleagues as a result of participation in the virtual professional development program. Their direct quote follows:

> (2A-t1) Like with the ELLA-V program we would share our stories and we would share lessons and how we were going to do them so you were able to get ideas from other teachers not just in your city, but in other cities, so it was very interesting to see their ideas and hear them out, and I guess if they had any concerns or any feedback, but I think that's the way staff development should work where we all share ideas.

Another participant said the following about teachers collaborating:

(1-C, p14) Pues los del ELLA-V me gustaba mas porque tenian de que ok vamos a compartir, cuando haciamos los meetings, los online meetings, como le decian. Era mas de que ok, como por ejemplo, we are going to meet on Wednesday online, the virtual, como se llamaba, entonces ya despues ellos nos decian this is coming up, vamos hacer esta leccion, tal, tal, tal, y luego ya compartian los demas maestros, mira esta leccion, esto es lo que vamos hacer y era mas asi como you already knew what was coming and you could prepare. [Translation: I like the ELLA-V because they were like ok we are going to share when we would do the meetings, the online meetings. It was like, for example, we are going to meet on Wednesday online, the virtual, so they would tell us this is coming up, we are going to do this lesson such and such, and then the other teachers would share, look at this lesson, this is what we are going to do, so you already knew what was coming and you could prepare.]

A different participant also talked about collaborating during online meetings:

(2E-t2, p7) ELLA-V is really complete in general expression. It's complete…. They are helping you through the trainings every two weeks and also, they were sharing from other schools, so you could see "Oh, they are doing this so I can improve my teaching." You get ideas from other schools. I don't know who created this program, but this is really awesome.

Similarly, another teacher said the following regarding sharing through the Webinars and learning from other teachers:

(4B-t1, p5) I loved those Webinars because I did learn a lot from other colleagues that were working and different strategies that they would use. They were very

beneficial…You would see what other teachers would do and you would get ideas to how to use it in your classroom.

Likewise, another participant commented on the benefits of the Webinars, collaborating with other teachers, and online coaching:

(4A-t2, p8) I think ELLA-V was more detailed. They helped us with the coaching and the other teachers involved they helped us to understand better what we were supposed to do or how to help our students versus the traditional now is just more informative and you sign and ok, we gave you the information and you read it on your own. And now with ELLA-V even though we had a meeting every week for a whole hour and they went through each of the lessons that we were supposed to do for that week, that helped a lot, getting new ideas, and finding different strategies, different ways of helping our students. The traditionals, they are just quick, they are like little crash courses. And the fact that it started since the beginning of the school year towards the end, it's the time frame that really counts.

A different participant said the following about collaborating with another colleague in a remote site:

(2B-t2, p5&7) We had that Webinar when we finished ELLA, I know we had a little time, so I hooked up with a friend to go over information and stuff from another campus that had that Webinar…. I remember the first year I tried it, I told as many people as I could. I would tell them it's very good, I love ELLA because it gets everyone involved.

Moreover, another participant explained how they share what they have learned with their colleagues:

> (1C-t2) I've talked to other teachers about the strategies porque unos no sabian, como los nuevos, maestros nuevos, no saben muchas estrategias, entonces yo les hablaba que yo hice el ELLA-V program y le puedes hacer asi y ya las estan usando tambien. [Translation: I've talked to other teachers about the strategies because some didn't know like the new ones, new teachers, they don't know many strategies, so I would tell them that I did the ELLA-V program and that you can do this, and they are now using them.]

In addition, a different participant also mentioned how they share and collaborate to help each other in person as well: (2E-t2) "Since this program [the district's program] is coming in, I just clarify how we did it with ELLAV, and they are able to understand it better." Furthermore, an additional participant commented on the benefits the program would have with all teachers and sharing ELLA-V materials. Following is their direct quote:

> (4B-t1, p7) I would have it for all the teachers… I would tell my colleagues "This is so (emphasis added on 'so') awesome!" And I wanted them to do it as well, but um, we are doing something else, but sometimes I would lend them the books for them to read to their students.

Likewise, another participant also said the following regarding sharing and collaborating with colleagues:

> (3A-t1, p7) You know, we have to be in agreement and that's when we share our materials. And yes, it helps because I've been teaching forever and we didn't use to do that at the beginning. Everyone used to do their own thing, you know, these

are my materials and I'm not going to share. Now, we all bring it, and we all

share, discuss what we are going…. We meet twice a week…. And that's where

the science comes in. When we talk about science, we are always taking our little

notes, sentence stands, anchor charts…

It is therefore evident from the data that the collaboration made possible by the virtual

professional development program was beneficial to teachers in making their work environment

more amicable, it helped teachers save time in producing and looking for materials, and helped

teachers with new ideas and how to implement lessons. Consequently, students also benefit from

prepared, enthusiastic, and highly qualified teachers.

Theme Four: Increased Teacher Confidence

The fourth theme that emerged from the data is increased teacher confidence. In addition

to increased teacher collaboration, the virtual professional development (VPD) program,

coaching, and mentoring also increased teacher confidence. Participants mentioned that they felt

"more confident," "empowered," and "at an advantage." One participant (1-C) said the following

regarding virtual coaching and increased teacher confidence: "It gave me reassurance that I was

doing my lesson in the correct way… I felt more confident when it was time to do my lesson."

Similarly, a different participant said they felt more relaxed and confident. Following is their

direct quote:

> (2E-t2, p3) I now feel more relaxed. I know I have to plan the lesson, but now I
>
> go to my ELLA-V things, the box, because I know I'm going to find it there…. I
>
> feel more confident with the things that you provided me.

A different participant said they felt more comfortable participating at a VPD than in person. Their direct quote follows:

> (4B-t1, p8) Even though you can participate when you are in person, but here it's more, I would feel more, how can I say it, not at ease, but maybe more comfortable to participate…. When we are sent to professional developments, it's a bigger group. Personally, I feel maybe more shy to ask questions or to inquire, but in the ELLA-V group, I would feel more comfortable, and if I had a question, I would ask right away.

Another participant felt ahead of the game because they already knew the strategies when they went to other trainings that presented similar strategies. Their direct quote follows: (1-B-t1) "We are one up on them because we already did this as opposed to them just barely learning it." Participants not only felt better prepared and more confident, some even got recognized for their work at another district professional development. The recognition also contributed to the teachers' increased confidence. Following is an excerpt from their interview:

> (3A-t1, p10) And they kind of acknowledged us that we are doing an awesome job, and we said, "hey! What's going on? What do they want from us?" Because honestly, they've never done it, they've never done it, but it was really good.

Thus, in addition to the previously mentioned benefits of virtual professional development (VPD), teacher increased confidence is another benefit that emerged from the data. It comes about as a result of the teachers feeling better prepared. Throughout the interviews participants looked back and reflected on the VPD program and their growth. The following theme focuses on teachers' reflections.

Theme Five: Encourages Teacher Reflection

The fifth theme that emerged from the participants' interviews is that of teacher reflection. Even though it was not a direct question from the interview, participants talked about their self-evaluations, and reflections. Teachers reflected on their teaching and the importance of program implementation fidelity and consistency. One participant reflected on the virtual professional development program: (1-B-t1) "It kinda made me take a step back and think about what I needed to improve on as a teacher." Nine participants said they liked the immediate feedback from the VPD. One participant said that feedback helped them reflect as a teacher to improve in working with their students. Their direct quote follows:

> (4A-t2, p14) I'm very thankful that I was part of the ELLA-V. It gave me new ideas and way of teaching and kind of reflected on the way I teach. Sometimes we don't see ourselves even though the administrators make walkthroughs and evaluations, we're provided with some feedback, but not as much as I did with the ELLA-V that I felt they provided the necessary feedback for me to continue working with my students.

A different participant commented the following regarding the use of the bug in the ear and real time coaching and how it helped them grow professionally:

> (4B-t1, p4) I would love to do that all the time! Because somebody was seeing what I was doing and I guess if I would continue with that it did help me grow professionally. I would notice little mistakes that I didn't notice before and somebody would see them and tell me do this and do that.

Similarly, another participant said they targeted the areas that they needed to work on. Following is their direct quote:

> (1B-t1, p3) And at first it was kind of difficult, the feedback, oh my gosh, and that kind of helped me because I saw, ok, I need to do this, I need to do that. And whatever feedback they would give me, ok, I need to work on this, I would target whatever I need to improve. So, every little feedback they gave me, I worked on that. And I actually saw the kids…. They are transitioning into English.

Further, a different participant reflects on the impact the program has had on them and their students' motivation: (2D-t1, p3) "I think ELLA has helped me inspire and make them better readers. At the beginning they do it for me, but in the end, they are doing it for themselves." Similarly, a different participant said the following regarding personal growth: (3A-t1, p3) "I've been learning a lot with the kids…. So, I'm growing with them too." Additionally, another participant reflects on realizing the students' capacity:

> (1D-t2, p3) I think it uh it opened my eyes to the higher order thinking questions. Cause to me it was like oh these are hard, they are kinder, they don't know or they can't. And actually, as we were doing them and as the year was progressing, they were able to do more of those questions. They were able to answer more of those higher order thinking questions. And to me it was like no, they're small, but I realize that you know what, they do know. You just have to expose them to everything that you want them to learn. It did, it really impacted them.

Reflection is very important for growth. The data shows that the virtual professional development program was conducive to reflection. Teachers targeted their areas of need for improvement based on their own analysis of their work and with the aid of the mentor feedback.

Participants also reflected on the growth that they had, which motivated them to continue implementing what they observe had proven successful with their students. The success of the virtual professional development program would not be possible without implementing it with fidelity, which is the following theme.

Theme Six: Commitment to Fidelity of Implementation

Furthermore, the sixth theme that emerged from participants' interviews is fidelity of program implementation. Consistency, sustainability, and accountability emerged as subthemes from the participants' interview data. Fidelity of implementation refers to the degree to which participants implemented the program. For example, participants implemented all the materials given including the script, books, and manipulatives. Consistency refers to the accuracy with which participants implemented the program both during the year of implementation and subsequent years. Participants were supposed to implement the program every day for 45 minutes. Sustainability refers to the maintained use of the program beyond the year of implementation. According to Laura Cajiao-Wingenbach, ELLA-V lead coordinator, "The goal of the VMC is to support effective second language instructional strategies and provide teachers with real-time supportive feedback to improve fidelity of lessons" (Texas A&M Today, 2018, ¶ 7). Interestingly, although a (1B-p) principal's perception was that the teachers did not continue to use the program, many of the interview data from the teachers indicated the opposite. The principal is new to the school and was not the principal the year that the teachers implemented the program. Below is the participant's direct quote:

(1B-p) We went to a training yesterday, and it was the first time I heard a comment about ELLA-V. The teachers mentioned that this was covered in ELLA-V, but it gave me the impression that they don't continue to use what they used in ELLA-V.

Nonetheless, all participants said that they continue to use the strategies at least in part if not all the strategies; five of the 27 participants said that they continue to use the script; and eight of the 27 participants said that they continue to use the materials that were non-disposable or those they are able to buy more of such as dry erase markers. Below is a direct quote from one of the participants reflecting on implementing and being consistent with implementation of what has been taught at professional developments:

(1B-t1, p3) To tell you the truth, we would have trainings, so the think pair share, and I remember that we would always have trainings on those, but I never implemented the way I should have implemented it. So, it wasn't until I started doing the ELLA that I started implementing it and implementing it and implementing it. Because I know at the beginning, it is one of those things that you have to do daily. You have to be consistent. And that is what ELLA taught me, when you start something you have to be consistent and keep it up…. I noticed this year that I keep implementing the strategies that I learned, and I learned that these kids are more open to the language…. They are transitioning into English.

In addition, a different participant also reflected on how it was hard at the beginning, but being consistent helped the students increase in their vocabulary:

(1D-t2) Actually at the beginning it was really hard, it was difficult to implement it because usually I get the really low kids, the lowest group, I mean they are really low in English, so they don't know basic words. So, we were teaching them words that were not from their everyday use, but I think if you use it constantly, after January / December you can start seeing that the kids are using the vocabulary…. I mean you follow everything that you have there, I mean, you should see the results. You know, it's not like an overnight thing, but it works.

Moreover, one participant talks about the benefits of being observed through the video cameras and being held accountable for the fidelity of implementing the lessons and strategies. Following is a direct quote from their interview:

(1D-t2) The fact that somebody is (emphasis added on 'is') watching you, like you cannot not do it. You cannot fake it, you know you need to do it, you need to follow and I guess at first glance it's a bad idea, you know as a teacher you are like, what? I don't want anyone watching me, but um I think thinking about it again, I think it's actually good because it keeps you in check for you to know that you need to be on task and the kids need to learn.

Nonetheless, four participants that were interviewed during their second year of participation in the virtual professional development (VPD) program mentioned that the first year of implementation was better than the second year. The participants saw more student improvement in the first year than the second. Some of the reasons that participants talked about include the time the program started. The first year they started in August before the academic year began, while the second year the program started in January. Also, the second year of implementation, the participants did not get all materials, the script was incomplete, and the

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online component was also lacking. Following is a direct quote from one of the participants in their second year of implementation:

(2D-t1) Este año no nos exigieron. [Translation: This year it was not required.] Just waiting for instructions. I think it was the coordinator and this year it didn't help that it started in January. This year no meeting. Last year it started in the summer and in one day they told us everything, this year we just get an email saying that a reading story is next. Last year everything was very structured.

Further, a participant said the following comparing two years of program implementation:

(1D-t1) When we were doing the program, it was actually pretty nice. The kids at the end of the year were able to talk more, be more fluent and be more able to share their thoughts in English with their peers. And um this year we didn't use it as much because we have our own curriculum and the kids don't talk a lot of Spanish, a lot of English, I'm sorry, and they are intimidated when you talk to them in English and when you want them to respond in English, they won't respond. And the ones from last year, they would. And even the questions that we thought were hard, like wow this is an elaborate question, they were able to answer the question and like talking to you answering the question.

Another participant similarly made observations referring to students' progress comparing two years of implementation:

(3A-t1, p2) She had a lot of growth, at the beginning she had no letters, no sounds, of course it's also part of our curriculum, but I mean it was totally awesome! Last year. This year, I'm seeing it too, but we started in January. You see last year we started in September. So, it made a difference those three or four

months, it made a difference. And this year we didn't test, and I'm not going to

get evaluated or observed.

As is evident from the participants' interview data, the program has been very successful when both teachers and program facilitators implement the program consistently and with fidelity. Accountability and evaluation are also crucial to obtain positive results. It is thus evident from the data that most professional development programs produce successful results when they are research based; they provide effective quality instruction; they are consistent; and they are implemented with fidelity.

Theme Seven: Linking Professional Development to Student Outcomes

The goal of the program is to increase English language among English learners (ELs) and produce bilingual and biliterate students. The seventh theme that emerged was that of student improvements; and, academic development and confidence emerged as subthemes. Theme seven also answers research question two, which was: To what degree did Project ELLA-V impact English acquisition for native Spanish-speaking students in border communities in grades kindergarten through third grade based on teachers' perspectives? In regard to research question number two, data revealed that 15 of the 27 participants talked about student academic improvements in English language development, reading, listening, and vocabulary, among other areas. English learners were able to close the achievement gap and succeed in other subject areas parallel to their improved English language. One participant said the following about noticing students improve in English usage: (1B-t2) "I notice them earlier on, since January the kids were growing in English, the kids were actually acquiring the English." A different participant talks

about closing the achievement gap. Their direct quote follows: (3A-p, p6) "There is really great vocabulary development…. I see that they are just about heads and shoulders above their peers who are already native English speakers. So that's kind of fascinating."

Furthermore, participants were asked to recall success stories. Seven of the 27 participants mentioned that the timid students started to 'bloom' and talk more as a result of the English instruction from the ELLA-V virtual professional development program. A participant shared an anecdote about a girl that was inhibited at first, and with the use of the strategies, the student started speaking more and using more English. Following is the participant's direct quote:

> (1-C t2) Pues habia una niña que llego asi, casi no hablaba nada, estaba muy cohibida de usar el ingles y todo y como que no queria. Y luego ya despues con las actividades, and with the strategies and everything, she started like to, a usar un poquito mas el ingles y todo y luego para el end of the year, pues ya andaba un poquito mejor, no mucho, pero si. Mejoro en el ingles y todo. [Translation: Well, there was this girl that arrived and she almost didn't speak anything. She was very shy about using English, and everything in general, she didn't want to. And later on, with the activities and strategies and everything, she started to use English a little more by the end of the year, so she was doing a little better, not much, but yes. She improved in English and everything.]

Another participant also shared the following student's success story:

> (2C-t2) I have a little girl, she was labeled as low… it's because her primary language is Spanish… I see her speaking more in English, I see her more comfortable. They actually thought that she was going to be RTI… they were

prepping her to be a low achiever and she's not, she's mastered everything in the

TPRI, except one part, and as of the last time we met, they took her off the list.

Three participants in particular talked about the benefits of the program for students that have not

been previously exposed to English. One participant's direct quote follows: (2B-t2, p7) "The

process and it helps kids that are barely learning English, especially kids that are barely learning

English. It is a very good program for English language learners." Another participant

commented the following regarding the benefits of the program for English learner students:

> (2E-t2) It was a positive experience especially with those students that were recent
>
> immigrants and starting to learn English because in the program itself, apart from
>
> it that it was very structured, it told you exactly what to do, you redirected the
>
> students and helped the students learn the English and learn the vocabulary and
>
> they were excited of course with all the little experiments that we were doing.

A third participant that specifically talked about the program's benefits to English learner

students said the following:

> (3B-t1, p1) I was using the district's curriculum, which is Reading Street. That
>
> one is not so exciting. Well, it's not very friendly for bilingual students because
>
> the material is not; I guess it would be more accessible and easier to comprehend
>
> if you have the language. But with the bilingual students not having the
>
> language…. I still have kids crossing the border every day…. What I like about
>
> this program is that the books lend themselves through a lot of visual learning….
>
> The subjects are interesting and they just lend themselves to my kids. I really just
>
> like this program a whole lot more. It sounds like I'm just really fascinated.

In addition, another participant commented the following on being able to do science while teaching English to English learners: (2B-p) "All I can tell you is that the teachers like it because they actually have a time for science time because in the lower grades they focus mostly on reading, writing, and math." Likewise, a different participant talked about students being excited about science and closing the achievement gap. Their direct quote follows:

> (4A-t2, p1) Every time they tell me "we love science, we love going to you." I wish I could use it or implement it in my lesson for next year because it did help. I saw a big increase from the students from last year. They've already done the transition into the English, the ELLs, I just found out last week that they did the transition. They are even higher than the other students that were here in the all-English setting. So, I think it's a very good program.

Moreover, from the data emerged the second subtheme of student confidence. Participants expressed how students increased their confidence through the use of the virtual professional development program. The students grew more confident as they improved their English skills. Twelve of the 27 participants said that they observed their students more "self-confident," "comfortable," and "relaxed." Likewise, a different participant said the following regarding students' confidence and English acquisition:

> (4B-t1, p13) Well, with ELLA-V I would see them more confident because at the beginning they didn't want to speak English, but then towards the end, I would hear them having small conversations and trying their best, trying their best with their words. And even though sometimes they would code switch, I saw a difference in their confidence.

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It is thus evident from the data that all the program's components: research-based virtual professional development (VPD), coaching, mentoring, lessons, materials, and strategies affect the quality of teacher preparation, boosts student confidence, and increases academic outcomes. Student academic outcomes and student confidence are bilaterally related. Students become more confident as they see results in their academic performance, and students' academic performance increases as their confidence increases.

Theme Eight: Knowledge Gained from Professional Development Highly Transferable

Transferability of the material and strategies of the program to other subjects and to other grades is the eighth theme that emerged from coding and analyzing the transcribed interviews. Eight participants mentioned that the program could be applied to other subjects not just reading or science. One participant's direct quote follows:

> (3B-t1, p1) What I like about it is the simplicity about it. When we got our kit last year, six or eight books per week, well, one book per week, but it's multiple copies. And that covers everything! I was able to use my reading, my writing, my language arts, I was able to incorporate it into math, my science, my social studies, depending on the book, but it was just that one book.
>
> I look at my Reading Street and I have all (emphasis added on 'all') those boxes, with all those readers and they're supposed to try and read it on their own… they can't…. it's just not feasible…. I just don't like Reading Street. I just cannot find a whole lot nice to say about it… it's terrible (covers mouth after saying "it's

terrible"). … A lot of the ELLA-V books lend themselves for multiple subjects, which is great. It made my life so much easier.

Another participant said the following regarding the use of strategies in other subjects: (1-C t2) "Ya las implementan, no nada mas en science, tambien como en otras, pues en todo lo puedes utilizar, en todas las materias, en reading, en math." [Translation: They already implement the strategies, not only in science, but also in others, well you can use them in everything, in all subjects, in reading, in math.] One administrator said the following about the program's strategies: (3A-p) "The strategies that I have seen in [teacher's] classroom need to be in all classrooms." A different participant commented how they share with other teachers the applicability of dry erase boards to all subjects:

> (2E-t2) I tell them the dry erase board is really useful during the lesson because they are listening and they are writing, so they develop oral language and writing development plus the academic vocabulary… That one was for science, but I use it for reading, math, science, and social studies. I had to keep buying the markers.

Additionally, transferability of the program also refers to other grade levels. Nine participants mentioned that the program could be beneficial to all students in other grade levels and not only their grade level at the time of participation in the professional development program. For example, one participant (1-C t2) was in kinder during the year of ELLA-V implementation. The following year, at the time of the interview, they were in first grade, but they were still able to use most of the strategies and materials they used the previous year. The following is a direct quote from the participant regarding being able to continue to use the ELLA-V strategies and materials in a different grade level: (1-C t2) "Si, yeah, some things todavia porque unas cosas todavia las miran en primero, lo de kinder, pero overall, si uso como

todas las estategias y todo eso que estabamos usando." [Translation: Yes, some things still because they still see them in first grade, what they saw in kinder, but overall, I do use all the strategies and everything we were using.] Another participant, quoted below, talked about using the program for all English learner (EL) students and closing the achievement gap:

> (1D-t2) I think that most, the majority of our ELLs would be really comparable to the non-LEP students as far as their knowledge of words…. So, if everybody would use it, the kids would be exposed to things that they don't necessarily get exposed to with their families because of things that you know are not necessarily under their control.

Similarly, another participant talked about closing the achievement gap. Their direct quote follows: (3A-p) "Vocabulary development is missing from all of our students. This program would really help close the achievement gap, so I am going to use it with my special education staff development also." Participants and their students benefitted from the program's transferability to other subjects and other grade levels. The benefits of the program transcended subjects and grade levels. It is something that teachers can take with them if they change subjects, grade levels, or even schools. Thus, making the benefits of the program far more reaching for both teachers and the students they influence.

Theme Nine: Teachers as Critical Consumers of Professional Development

The ninth theme that emerged from the interview data is that of participants' experiences with other more traditional professional developments (PD). Theme nine contributes to answer research question three: What types of professional development do teachers and administrators

perceive to have more impact on teachers, students, student learning, and student confidence? Comments from participants' interviews regarding attitudes toward professional developments varied. While participants realize that professional development is an essential part of education, growth as a teacher, and requirements for recertification, some participants mentioned on different occasions areas that professional development falls short of teacher necessities and expectations. For example, among the things that participants mentioned that are lacking from professional developments are that they are sent to PDs that do not pertain to their grade level or subjects that they teach; they lack a follow up; they do not have a choice as to which PDs they attend; there is not enough time to implement what they learned and see how it impacts their students; and administrative directives change too fast and too often.

A subtheme that emerged from the traditional professional developments (PD) is that of administrator and teacher roles in professional development. For the most part, administrators coordinate and assign teachers to professional developments. Sixteen of the 27 participants said that they did not have a choice as to which professional developments they participate in. Three teachers said that they could vote or suggest to administration what PDs they would like to participate in. A teacher said the following (in a sarcastic tone) regarding the lack of autonomy in being sent to professional developments:

> (3B-t1) It was on a 'voluntary' (participant uses air quotations) basis because it was over the summer. So then, not everybody has the same opportunities to gather the resources that were given or the materials that were shared. Yeah, it's voluntary when your principal says "You want (strong emphasis added on 'want') to go to this training." And you say, "yes (emphasis added on 'yes' with a sarcastic tone), during the summer, and on my birthday (emphasis added on 'my

birthday'), and for three days, yeah sure! I really want to go to that training. I have no plans over the summer." Yeah, it's 'voluntary,' it's a nice way of putting it, right?

Administrators responsible for planning and implementing professional developments (PDs) also see the importance in high quality professional development programs in order to help teachers improve their teaching, provide high quality instruction to students, and subsequently help students succeed academically. One administrator said the following regarding professional developments:

> (2B-p) But you know for me my number one priority is my students and in order for my students to receive the best possible education that they can get, I must provide good (emphasis added on 'good') staff development for my teachers, so it's very important.

Another administrator talked about the process of assigning teachers to professional developments. Their direct quote follows:

> (1B-p, p9) We perform a needs assessment with teachers to see what professional developments they need or would like to participate in. We use survey monkey to see what PD teachers feel their areas of need are and then we choose according to that. So, we base it both on our walkthroughs and what we see they need improvement in and what they feel they need.

Nonetheless, eight participants said that the professional developments (PD) they have participated in the year of the interview have not been related to their teaching assignment or area of need; the PDs were more "one size fits all." Teachers benefit more from targeted PDs just as students benefit more from targeted differentiated instruction. It is also more time and cost

effective when teachers receive professional development targeted to their grade level, subjects taught, and based on areas of need. One administrator said the following regarding teachers being sent to PDs even though it does not directly pertain to their grade level or teaching assignment. Yet, administrators still believed the PDs benefit students academically:

> (1B-p) Even though the training is for pre-K, we sent other grades as well because we thought that they could benefit because they provide very good ideas. And they did benefit because a lot of the students in kinder, first, and second are lower academically and they do benefit from those strategies.

A different administrator talked about the lack of differentiated teacher participation in professional development. Their direct quote follows:

> (3A-p) Currently, my first and second grade teachers are out today for bilingual training, and it may or may not fit the needs of all the teachers, so I think it's very hard as a district to specify ok these three teachers need this, so we're going to provide it; ok, these six teachers need this, so we're going to provide that. We don't really differentiate for our teachers.

Another subtheme that emerged from the interview data regarding more traditional professional developments is that of feedback and assessment. Another important aspect of professional development is assessment both for the teachers' successful implementation and the impact that it has on the students. Eight of the 27 participants said that professional developments usually do not have a follow up; five participants stated that the assessment is usually a survey at the end of the professional development; and 13 participants said that the follow-up involves administrator walkthroughs or classroom observations. However, the walkthroughs and observations do not necessarily target the proper implementation of the PD

material; the walkthroughs and observations are more general. Moreover, one administrator stated that the observations are not consistent for all teachers. Following is the participant's direct quote:

> (1B-p, p12) The walkthroughs act as the professional development follow-up for the teachers. And we look at the data to see how the students are doing. We are four administrators and each administrator is required to do ten walkthroughs 10 to 15 minutes. So, one teacher may be observed twice a week, while other teachers may not be observed that week.

Another subtheme that emerged from the data refers to teachers' sentiments after completing a professional development. Twenty-one of the 27 participants talked about how they feel after attending a professional development. Twelve of the 21 participants had positive comments regarding how they feel after attending a professional development. Among the responses the participants said they feel "more prepared," "confident," "motivated," "optimistic," and "eager" to implement what they learned at the professional development. Following is one participant's direct quote regarding the aftermath of attending professional developments: (2B-t2) "Usually what I do like is, I'm like, there's some new ideas, I guess eager would be the word… I'm eager to try what they showed us to see if it really does work and if it is helpful." Another participant talked about their sentiments after a professional development. Their direct quote follows:

> (2c-t2) Ya me voy pa' la casa! [Translation: I'm going home!] (laughingly). When I get a good idea that I say, wow! I'm going to try that, I feel like ok, I can't wait to do it. … I haven't had a good one in a long time.

On the other hand, nine of the 27 participants interviewed said they felt "overwhelmed," "tired," "anxious," and "exhausted" after professional developments because of the duration of professional developments, the amount of information presented, and the time allowed for implementation. One participant's direct quote follows regarding how they feel about professional developments: (2D-t2, p13) "Like we just have more work, a waste of time. Just put it in a power point and send it to us." A different participant said they felt preoccupied and anxious after professional developments. Their direct quote follows: (4B-t1, p13) "To be honest? Very worried, very concerned of meeting scores and what is expected from the children. Preoccupied, very anxious as well. More things to do, more scores to meet." Another participant mentioned that they are tired after professional developments and they are not aware of the impact the programs have on their students. Below is their direct quote:

> (2A-t1) Exhausted from our lecture! It's mentally draining after, but we have to because it is part of our recertification process… I don't even know how they respond to the program. And we don't get their reading results either, we have an instructional specialist that I guess monitors them, so we are not even able to see the results of the program or how it works.

Similarly, a different participant said the following regarding their feelings after a professional development particularly if it is not productive and relevant to their students:

> (3B-t1) Some of these trainings are exhausting quite honestly because if it doesn't really affect or if I don't find that it's going to help me with my lessons or with my grade level, I'm wasting a lot of time. But if I find that it's great for my kids, I find it very interesting, I walked out very energized, it's very motivating when I have something, when I sit and take notes, when I find that I'm actually able to

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use it and implement it. If no, I'm tired, I sat through six to eight hours, waiting

for something to be like oh yeah, this is going to be great.

Likewise, another participant comments on the importance of consistency and continuous

feedback. Following is their direct quote:

(1B-t2) I guess it's just too much information trying to pick here and there what

works for us, and what works for other kids. [But with ELLA-V] It's good, I like

it. I like the fact that they were very consistent and they always went back and

reviewed and repeated and repeated what we needed to learn. So, it wasn't

something that they mention it once and ok the teachers got it, let's move on. I

like that it kept repeating and repeating and when they would review the strategies

over and over.

Moreover, a participant talks about the length and information presented at professional

developments. This participant also compares effective professional developments as opposed to

convenient professional developments. Following is their direct quote:

(1D-t2) There's like good and bad things… the good thing is that they give you an

hour development for these coming weeks and then they'll check how it's going.

[Referring to ELLA-V] But if you want convenience, I guess, go with the whole

day or whole two days. But if you want it to actually be effective, maybe it would

be better to do shorter, check, shorter, check, shorter, check. I think that's better.

Even if we are adults, after 3-4 hours you are like… (made snoring sound) you

know so the whole day is a lot. Even if the training is really good because

sometimes the trainings are really good, like cool and they have a lot of fun things

to do it's like a lot of information to use all these months and then we'll check in

like over here… pos no… I already forgot whatever you said because it's a lot (strong emphasis added to 'a lot').

The same participant continued with comments regarding feeling overwhelmed with excessive information and strategies presented at professional developments:

(1D-t2) We had another training and they gave us more strategies new ideas, but again, there's just too many. Don't give me too many options because too many options just lose you…. I feel like excited at the moment, but mañana se me quita. [Translation: The excitement is gone tomorrow.] I mean to be honest because it's like a lot of information that they give you and a lot of them are good and you want to put them in the classroom, but then when you come back and you see all this other stuff that needs to be done you are like … uh… Maybe later. It's not something small that you can just ok let me put this there, but it's like a lot (strong emphasis added on 'a lot').

Also, the same participant (1D-t2) goes on to say that program change is frequent according to the latest training fad that they attend. Following is a direct quote regarding the fidelity and consistency of program implementation:

(1D-t2) In school here we go to the training and it's really nice, we do all these activities, but then you might use them, you might not use them because ultimately you are like ok, that is a really good idea, but I already have all the materials for this other stuff so you are going to be using whatever is most convenient and available to you even though, and specially… they always change. Like you do one thing and you get all ready and then it's like no (emphasis added on 'no')! We're doing something else. And you are like 'Hey come on!' It takes

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time to get your stuff together and for you to know if this works or this doesn't

work. So, if they change it, it might be a good idea, but you are always like ok,

let's leave it for next year, and then next year they'll have something else. Um,

they don't necessarily come and check.

Lastly, a different participant spoke about the timing of the professional developments:

(1D-t1) They just give you an overall and then from there you figure it out. And

sometimes the staff development that they give you at the middle of the year and

I'm like uuuh I could of used this at the beginning of the year! Or they do it at the

end and you know what, the time has passed. I'll use it for next year.

An additional subtheme that emerged from the participants' data is that of implementing

what they learned at professional developments. Six participants stated that they are unable to

implement what they have been exposed to at professional developments mainly because they

lack time to prepare and implement. Following is a quote from one of the participants regarding

implementation of what they learn at the professional developments: (2C-t2, p11) "I do what I

do. I don't know. I've been doing this for so long… Yeah, I continue to do the same thing… the

thing is I haven't been to an aha! training."

On the other hand, 13 of the 27 participants said that they do implement what they have

learned at professional developments whether as a whole or partially by modifying, picking, and

choosing what best works for their students. Following is a direct quote from one of the

participants regarding the implementation of what is presented at professional developments:

(2B-p) When you do attend a staff development, unless you are a super weak

teacher, but for the most part, it's supposed to strengthen the program that you

already have in place. So, it's not like you are copying every single thing that you

learned, but picking and choosing those things that will best meet the needs of

your students.

Another participant mentioned that it is difficult to implement what is learned at professional

developments because the materials are not readily available. Following is the participant's

direct quote:

> (3B-t2) If we are not given the material, it's just kind of a moot point. I do try to, I
>
> make a lot of my own things, if it's something that I can purchase or I can make, I
>
> try to get it done. You know, so that I can implement. And I think that's always
>
> been like a pet peeve when they send us to an in-service and they kind of promise
>
> you the moon and the stars, but then they don't give you anything to follow
>
> through with, so we kind of have to think of it ourselves.

Therefore, it is evident from interview data that participants are interested in professional

developments and furthering their learning; nonetheless, many times the timing is not optimum,

professional developments fall short of teachers' expectations, and teachers lack time and

resources to implement what is learned at professional developments and assess student

outcomes. Thus, according to participants' data, in order for professional developments (PD) to

motivate teachers and be successful, PDs need to be targeted to teachers, teachers need to be

involved, individualized, relevant, high quality, long term, provide support and accountability,

and provide a means to implemented what is presented at PDs.

Even though none of the interview questions directly asked how they felt about the

virtual professional development (VPD) ELLA-V program, several participants expressed their

sentiments toward the program throughout the interviews. Most teachers expressed satisfaction

and gratitude for being in the program. However, two participants felt that the ELLA-V program

would benefit new teachers more than veteran teachers. Participants in the program were chosen by administration. They did not sign up voluntarily. The following is a direct quote from one of the participant's interview regarding new teachers:

> (2C-t2, p2) I think the ones that would have benefitted more would have been new teachers to the system… I think maybe if you are going to continue doing this, maybe it should be they should get people with minimal experiences, rather than the principal choose whoever she feels like it… veteran teachers, they know, and we've been to enough trainings.

Similarly, another participant said the following regarding the program's real time coaching with the bug in the ear being more beneficial for new teachers:

> (2B-t2, p4) (The participant laughs with a nervous laugh.) It could be helpful at times, especially for new teachers. I think it would be especially helpful for new teachers. It can help you if they see something that you are not doing right, but I also see it that it could be an inconvenience when you are teaching the lesson.

On the other hand, seventeen of the 27 participants stated that they "really liked the program," and four stated that they "loved the program." One participant said the following regarding the positive aspects of the program: (3B-t1, p6) "It's hard to find a curriculum where you can make a lot of teachers happy, and this really seemed to make a lot of teachers happy…. It made my life so much easier." In addition, a different participant said the following regarding their sentiments toward the program: (4B-t1, p7) "That it's a wonderful program, and um, I feel honored and blessed to have been a part of this program."

Summary

As noted, nine themes emerged from this study: 1) streamlining professional development (PD); 2) challenges and opportunities in the adaptation of virtual professional development (VPD), 3) VPD promotes and facilitates learning communities in schools and with remote sites; 4) increased teacher confidence; 5) encourages teacher reflection; 6) commitment to fidelity of implementation; 7) linking PD to student outcomes; 8) knowledge gained from PD highly transferrable; and 9) teachers as critical consumers of PD. All themes are related and at times difficult to separate. However, it is evident from the data that the main idea is the importance of research-based, high-quality professional developments. Data from the interviews revealed that virtual professional development (VPD) greatly aids in the information delivery and real-time immediate feedback of professional developments as a more time and cost-effective alternative that produces positive results when implemented with fidelity. Also, data revealed the importance of allowing teachers to be involved in planning, facilitating, and active discussions of their own professional developments. According to participants, professional developments produce more successful outcomes when implemented with fidelity, when it is relevant, when there is a long-term commitment, and when there is consistent application of the program. Finally, VPDs are conducive of participants' collaboration increasing positive results for teachers and students. In conclusion, teachers felt better prepared to teach English to their English learner (EL) students, and they were more enthusiastic to continue implementing the strategies learned because they saw positive outcomes in students' academics, self-confidence, and English language acquisition.   In Chapter IV I closely examined the findings of the interview data from this research study. Nine themes emerged from the interview data analysis;

the data was analyzed by hand. In Chapter V, I will conclude with an interpretation of the findings, make connections, discuss the implications of the research, and make recommendations for future research.

CHAPTER V

DISCUSSION, IMPLICATIONS, LIMITATIONS, RECOMMENDATIONS,

AND CONCLUSIONS

This research study investigated teachers' and administrators' perspectives of virtual professional development on English acquisition for native Spanish-speaking students in four border town school districts. The purpose of this research was to analyze teachers' and administrators' perceptions about the effectiveness of virtual professional development by analyzing participants' data and organizing data into emerging themes. This chapter includes a discussion of the thematic research findings making connections to the literature; implications for future research, research policy, and practice; limitations of this study; recommendations for professional development programs and future research; and a conclusion of the research study. Three overarching idea clusters emerged from the study. The first incorporates themes 1, 6, and 9, which includes the necessity to streamline professional development (PD) for the educators that are very knowledgeable consumers of PDs and value the importance of implementing programs with fidelity. The second idea cluster incorporates themes 2, 3, 4, and 8, regarding overcoming virtual professional development challenges in adaptation, increased teacher confidence as a result of highly useful and transferrable information and strategies, reflection, coaching and mentoring, and collaboration through learning communities. The third and last idea cluster refers to theme 7, which links professional development to student outcomes.

Discussion

Streamlining Professional Development (PD)

For many years there has been an achievement gap between English learners (ELs) and their native English-speaking counterparts in content areas such as reading, math, and science because of ELs low academic language proficiency (Tong, Luo, Irby, Lara-Alecio, & Rivera, 2017). The first overarching idea cluster that emerged from the research findings incorporates the necessity to streamline professional development (PD) for the educators that have proven in this research study to be very knowledgeable consumers of PDs and know the importance of implementing programs with fidelity. There is consensus among researchers and participants in this research study that professional development (PD) is a necessity to maintain and improve teachers' pedagogical behavior and subsequently increase ELs' academic achievements (Crawford, Schmeister, & Biggs, 2008; Dash, Kramer, O'Dwyer, Masters, Russell, 2012; Desmoine, 2009; Lee & Buxton, 2013; Maerten-Rivera, Ahn, Lanier, Diaz, & Lee, 2016; Reeves & Li, 2012; Timperly, 2008; Timperley & Alton-Lee, 2008; Tong, Luo, Irby, Lara-Alecio, & Rivera, 2017). Participants also agree that not just any PD will suffice. One administrator (2B-p) who participated in this research study emphasized the need for good PD to meet the needs of the students, whom are the number one priority. However, PDs in theory appear promising, nonetheless in practice they often fall short of expectations because they are not research-based, lack of time, planning, resources, assessment, and support. Adey, Hewitt, Hewitt, & Landau (2004) caution to analyze skeptically programs that claim to deliver changes in students' achievements, but that only offer a one-day intensive course and lack a follow-up and support for teachers. Many times, there are no relevant professional developments available within teachers'

geographical area and to travel where one is available can be costly for districts or even teachers who often have to pay for PDs themselves. Furthermore, leaving the classroom to attend a professional development takes away from valuable instructional time. One teacher participant was particularly concerned about time and cost of PDs.

> (1B-t2) It's usually those trainings that they have out of city that we have to input our own money for it, or sometimes it's time during our school hours, so it's very difficult for us to attend because it is during our working time. They are really good about giving us a lot of trainings during the summer.

Research evidence is limited as to what constitutes good, effective, and high quality professional development for English learners (ELs) (Tong, Luo, Irby, Lara-Alecio, & Rivera, 2017). Not only is evidence limited as to which professional developments are most beneficial to better prepare teachers, but also how to do it in the most cost-efficient manner continues to be a problem (Fennema, Carpenter, Levi, Jacobs, & Empson, 1996; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Soder, 1991). Before deciding on which professional developments are most successful, it is important to recruit teachers and administrators that are highly qualified and then build them into lifelong learners (Crow, 2009). Top-down approaches that deliver evidence-based materials to teachers who want to learn or are pressured by the accountability system, may be successful but only in the short run (Adey, Hewitt, Hewitt, & Landau, 2004; Bechtel & O'Sullivan, 2006; Brand, 1998; Drago-Severson, 2007; Trehearn, 2010). Teachers who feel imposed upon may not have the best predisposition to experiment with innovative professional developments and classroom strategies (Adey, Hewitt, Hewitt, & Landau, 2004). Professional development is more successful in the long run if it is embedded in the daily routines of teachers. It should involve continuous mentoring and coaching for support, joint planning of lessons,

analyzing data, reviewing student work, and re-teaching lessons. This research study sheds some light on successful professional development practices. One main idea that continually surfaced in the research study is that teacher participants demonstrated a keen awareness of professional developments practices. Participants are clear in their knowledge of what constitutes a professional development that is beneficial to them and their EL students. For instance, participants agree with the literature that PD needs to be research-based, relevant, high quality, meaningful, ongoing, intensive, and it needs to incorporate meetings, workshops, support, follow-up, and time for practice and implementation (Ball, 1996; Brand, 1998; Cohen & Mehta, 2017; Harvey & Purnell, 1995; Hawkins & MacMillan, 1993; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Reeves & Li, 2012; Timperly & Alton Lee, 2008; Wilson & Berne, 1999; Tong, Luo, Irby, Lara-Alecio, & Rivera, 2017). Participants agreed that virtual professional development like the one provided through the ELLA-V program, is a good alternative to the traditional professional developments. The ELLA-V program incorporates long term PD, VPD, and coaching and mentoring infused with research-based teaching strategies for the EL students. This innovative manner of offering professional developments not only proves to save teachers' time, but it is also a cost-effective alternative for districts (Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Ullman, 2010). Nonetheless, teachers in this study agree with previous research that teachers need to be trained in the use of technology and they time to get accustomed to the technology involved in VPD (Delfino & Persico, 2007).

Professional development education needs to be streamlined. In other words, it needs to evolve with greater agility to minimize unintended consequences such as lack of time management, generic widespread PD for all teachers as opposed to individualized PD plans for each teacher, and interfering with student learning. Teachers understand that being out of the

classroom for an all-day PD causes setbacks on the students' learning. Streamlining education and professional developments makes it more efficient, more effective; it is reflective, and less disruptive. Participants (i.e., 2B-t2, p5, 1B-t2 2A-t1) agree that virtual professional development (VPD) saves time (i.e., travel time). One participant (2B-t2, p5) in particular said, "You have everything set up and you're right there. You pretty much can do it anywhere depending on what type the meeting or what things you would need. It is more convenient. Cut down on travel time."

Teachers are highly knowledgeable, demonstrate acute awareness about the delivery of professional development (PD), and teachers have strong views about PD. Teachers, as critical consumers, are conscious of what works for them, what does not, and what they need from PDs. They also express a concern of whether or not these PDs effectuate any changes in their students because many times they are unable to put into practice what they have learned at PDs because of lack of time and volatile programs. It is difficult to evaluate if PD programs are yielding positive results if they are devoid of an assessment component. Teachers are valuable resources and should be involved in the PD planning.

Consistent with the literature, participants said the timing of professional development implementation also impacts teacher participation and the professional development outcomes. The timing refers both to the point in time that they take the PD during their career and the time that participants attend the PD during an academic year. Veteran teachers or teachers that are at the top of the pay scale, avoid formal professional developments because they feel their time is worth more than what may be obtained from participating in professional developments (Scribner, 1999; Torff & Sessions, 2008). Similarly, a veteran teacher (2C-t2, p2) that participated in the research study suggested that the ELLA-V program would be more beneficial

to new teachers because they believe that veteran teachers "have been to enough trainings" and "they know." These perceptions vary greatly depending on the teacher's attitudes toward learning, growth, reflection, and change. Other teachers (1B, 1C-t1&2, 2A, 2C-t2, 2D, 2E, 3B-t1, 4B-t1, 2E, 4A-t2, & 4B-t1), on the other hand, felt that "there is always room for growth" and "blessed" to have been a part of the ELLA-V professional development.

Teachers understood how ELLA-V program was an innovative way of doing professional development (PD). Participants in the present study demonstrated awareness of various types of PDs and understand the core distinctions between this model and the other more traditional and informal models. They felt this was a good advancement in the way professional development might be done where they do not have to leave the classroom and students do not lose critical instructional time. Participants demonstrated an understanding of the implications of various forms of professional development. Participants in this study also understand that PD is essential for the development of education. They understand the role that traditional professional developments have. The traditional professional developments that are more informal in the sense that they are shorter in duration and rarely have an assessment component still provide refresher courses for the teachers and at times provide good ideas and methods for teaching. However, it is mostly a hit or miss type of professional development because these PDs are not individualized, they lack support, and assessment for accountability. Subsequently, if teachers did, by chance, learn something of value worthy to implement in their classrooms, they might or might not have enough time and resources to implement into their pedagogy. One teacher (1D-t2) commented on the difficulty of continuous change with insufficient time to plan, implement, and assess. The teacher talked about the experience of participating in one PD, trying to plan and prepare the material to implement in the classroom when all of a sudden administration tells

them to stop what they are doing to go to another PD and implement that new concept. The

teacher went on to say that it takes time to prepare and assess if something works with their

students. They may be good ideas, the teacher said, but the teachers will never know because it is

always pushed aside for the next PD and there is not assessment or accountability. Teachers

acknowledge and appreciate the benefits of having the time to implement and practice what was

learned (Adey, Hewitt, Hewitt, & Landau, 2004; Crawford, Schmeister, and Briggs, 2008).

Participants in my study also understand that more formal and progressive types of professional

developments that are research-based, long-term, allow for teacher reflection, provide time,

resources, support, and assessment are more likely to keep teachers accountable for the

implementation.

The more innovative professional developments (PDs) such as the virtual professional

developments (VPDs) do things more efficiently and in real time. VPD has the capability of

being presented in a consistent and long-term manner as opposed to being offered in a short one-

day intensive course. Consistent with the literature, teachers in the study agree that long-term

professional developments with ongoing support are more successful than one-shot, one-day

professional developments (Christensen, 2006). One teacher (1D-t2) participant in the research

study saw benefits in providing a continual long-term series of short professional developments

followed by coaches' checking in to see how teachers are doing and provide support such as in

the ELLA-V program. Information was presented for the following weeks in a one-hour

professional development and subsequently providing support throughout to check how teachers

are doing with the implementation. The participant believed that for a professional development

to be "effective, it would be better to do shorter, check, shorter, check, shorter, check. I think

that's better." On the other hand, the participant suggested that if "convenience," were sought after, the "whole day or whole two days" would be the alternative.

Commitment to fidelity of implementation and consistency are also important. According to Dash, De Kramer, O'Dwyer, Masters, and Russell, 2012, "if a teacher fails to apply new ideas from professional development to classroom instruction or arguably has limited opportunity to fully implement those new ideas, improved student learning cannot be expected" (p. 22). Consistent with the literature, consistency of implementation contributed to teacher and student success in this research study (Crawford, Schmeister, & Biggs, 2008; Tong, Luo, Irby, Lara-Alecio, and Rivera, 2017). Teachers reflect and compare ELLA-V to other professional developments where they did not implement with fidelity what they learned. Teachers saw positive results when they implemented the program with fidelity. One teacher (1B-t1, p3) said, "You have to be consistent. I noticed this year that I keep implementing the strategies that I learned, and I learned that these kids are more open to the language…. They are transitioning into English." The fidelity of implementation provides structure that keeps teachers accountable to make sure they understand and have the means to implement in their classrooms. Tong, Luo, Irby, Lara-Alecio, & Rivera (2017) advise that reliable, valid, and practical direct classroom observation protocols are necessary to ensure that teachers implement the strategies and information learned at PDs and appropriately allocate instructional time to assess effective teaching to create an environment that is conducive to increased student learning. In this study's ELLA-V program, there are ongoing assessments, observations, and coaching and mentoring on what was learned at the PD. ELLA-V provided the most acute observation practices by observing classroom practice through web cams and real-time coaching through bug in the ear. Consistent with the literature, participants agree that follow-ups and accountability are

fundamental to ensure proper implementation of professional developments in practice in the classrooms. However, in reality, few PD programs incorporate formal follow-ups into practice. Most informal, short-term, one-day, professional developments (PDs) do not have assessment components or are not evaluated equally. Many times, administrator walkthroughs act as the PD assessment even though they are informal and may not target what was covered in the PD. One administrator participant commented that teachers may not all be observed equally: (1B-p, p12) "We are four administrators and each administrator is required to do ten walkthroughs 10 to 15 minutes. So, one teacher may be observed twice a week, while other teachers may not be observed that week." Thus, the quasi-assessments provided by most traditional, short-term PDs may only pretend to cover the requirements of an assessment, but they are not the required full-fledged assessments that cycles to provide support, inform practice, improve pedagogy, and produce positive student academic outcomes.

Anticipating Challenges to Optimize Professional Development (PD) Outcomes

The following overarching cluster that emerged from the research study data encompasses overcoming virtual professional development challenges, increased teacher confidence in them and in their teaching as a result of the new knowledge gained, reflection, coaching and mentoring, and collaboration. There were challenges at the beginning of the ELLA-V program implementation not only because of the new concept and the challenges that those changes bring about such as resistance to change, but mainly because of the innovative type of professional development involving virtual technology. Nonetheless, once the challenges were overcome, teachers had a greater sense of confidence in themselves and their teaching because of the new knowledge that they acquired from the professional development has proven

to be highly transferrable, the time for reflection they were awarded, the support provided through mentoring and coaching, and the learning communities that arose among teachers in the schools and remote sites.

Research suggests that strong professional development communities contribute to school reform and instructional improvement (Akiba & Liang, 2016; Bechtel and O'Sullivan, 2006; Goddard, Goddard, & Tschennan-Moran, 2007; Koch & Appleton, 2007; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Lieberman & Miller, 2011; Little, 2002; Louis & Marks, 1998; Moolenaar, Sleegers, & Daly, 2012; Saunders, Goldenberg, & Gallimore, 2009). Not only do teachers as adult learners require collaboration with colleagues (Adey, Hewitt, Hewitt, & Landau, 2004; Brand, 1998; Christensen, 2006; Crow, 2009; Drago-Severson, 2007), but researchers also believe that sharing dialogue with colleagues can improve the quality of the professional development (Akiba & Liang, 2016; Ball, 1996; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Kennedy, 2005; Wilson & Berne, 1999). In agreement with previous research findings, participants in the present study found that the ELLA-V's virtual professional development (VPD) component promotes and facilitates learning communities among colleagues in the same schools and with colleagues in remote schools. Collaboration was made possible even with colleagues that were not participating in the ELLA-V professional development as long as one teacher was participating; the ELLA-V participant shared their experiences with their colleagues. This type of sharing bears resemblance to the Cascade Model which involves one or two teachers from a school or district attending a workshop or informal professional development and then cascading or transmitting the information by becoming the trainer to other teachers (Kennedy, 2005). Some teachers even became mentors to colleagues and consulted informally (Crawford, Schmeister, & Briggs, 2008). One participant in the present study said,

(2B-t2, p7) "I'm like the veteran doing it and I can mentor." As in other studies such as Crawford, Schmeister, and Briggs (2008), participants in this research study found that teacher collaboration resulted in positive outcomes for teachers. One participant said, (3B-t1, p9) "We share so much! It's just like a nice little community where everyone was working for the same goal and pretty much everyone had positive feedback."

Collaboration among teachers promotes more long-term positive outcomes. Teachers working together were more likely to continue implementing the change originally introduced, had more positive views about professional development, were more willing to implement new ideas, revised existing ideas, and implemented more engaging experiences for their students (Bechtel and O'Sullivan, 2006; Goddard, Goddard, & Tschennan-Moran, 2007; Koch & Appleton, 2007; Lieberman & Miller, 2011; Louis & Marks, 1998; Moolenaar, Sleegers, & Daly, 2012; Saunders, Goldenberg, & Gallimore, 2009; Scribner, 1999). Virtual collaboration in other research studies as well as in the present study had the same positive effects as face-to-face collaboration (Dash, De Kramer, O'Dwyer, Masters, & Russell, 2012; Harvey & Purnell, 1995; Reeves and Li, 2012).

Furthermore, not only did collaboration among teachers emerge as a relevant theme, but also between administrators and teachers. Administrator and teacher collaboration is important to involve teachers in the process and collaboration of the PD planning instead of applying a top-down approach and providing generic PDs for all or whatever is most readily available (Bechtel & O'Sullivan, 2006). This collaboration is part of the teacher buy-in that makes PDs more relevant and meaningful for teachers when they are part of the process (Brand, 1998; Cohen & Mehta, 2017; Harvey & Purnell, 1995; Hawkins & MacMillan, 1993; Newmann, 1996; Reeves & Li, 2012; Timperly & Alton Lee, 2008; Trehearn, 2010). Consistent with the literature, teacher

participants in this study expressed concern that they are seldom a part of the PD assignment process; they are usually simply told what PDs they are to attend. Participants also expressed concern that more often than not, the PDs they attend are not related to their grade levels or areas of teaching focus, which they perceive as a waste of their time. Administrators often struggle to differentiate PDs and pair teachers to adequate and meaningful PDs. One administrator (3A-p) that participated in the research study illustrated the difficulty in providing differentiated and targeted PD for every teacher's needs, stating, "It may or may not fit the needs of all the teachers, so I think it's very hard as a district to specify…. We don't really differentiate for our teachers." Many times, these practices often lead to wasted time and funds misappropriation, but many times it is the only option available because of geographical constraints or lack of resources. This is where virtual professional development (VPD) steps in to fill the gaps of traditional professional developments as a cost-effective, timesaving alternative to alleviate these obstacles and deliver high-quality research-based professional developments regardless of teachers' geographical location.

Results from the interview questions, show that teachers appreciate opportunities to come together virtually and in person to learn and exchange ideas. Teachers also said that they appreciate opportunities where they can independently reflect. The literature supports teacher reflection as an essential aspect for professional developments to contribute to its success (Ball, 1996; Brand, 1998; Cohen & Mehta, 2017; Harvey & Purnell, 1995; Hawkins & MacMillan, 1993; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Reeves & Li, 2012; Timperly & Alton Lee, 2008; Wilson & Berne, 1999). Teachers as learners need the opportunity to reflect on their practice and analyze how professional developments influence their students (Irby, Guerrero, Lara-Alecio, Tong, & Rodriguez, 2012). They need to be able to analyze successes and failures

in order to make necessary modifications. In their study with project ELLA-V, Irby, Guerrero, Lara-Alecio, Tong, and Rodriguez (2012) found that teachers gained confidence, as they were able to reflect in their practice. In accord with the literature, participants in this study reflected on their teaching and what they needed to do to improve as teachers; and teachers found the time for reflection invigorating and realized that they need more reflection time in order to assess the effects of various professional development strategies. Allowing and encouraging teachers to reflect independently can be done via an electronic environment. VPD encourages more independent reflection because teachers get more one-on-one communication through coaching and mentoring. They also enjoyed the immediate feedback from the virtual coaching and mentoring because it allowed them to see and further reflect and make necessary modifications to better guide their students.

Further, Mellom, Straubhaar, Bladeras, Ariail, & Portes (2018) found that by training teachers face-to-face in instructional conversation pedagogy coupled with intensive coaching support throughout one year with monthly check-ups, teachers had a positive ideological shift in their attitudes towards diverse students. Similarly, the ELLA-V professional development in this study included virtual instructional conversation pedagogy for ELs; it also included intensive coaching support throughout one year with monthly check-ups; and teachers also had positive outcomes in that they added to their pedagogical knowledge base and students had positive results, which I will discuss further in the following section. The coaching aspect focuses more on skills, while the mentoring aspect focuses on counseling. With both coaching and mentoring, the quality of interpersonal relationships is of utmost importance (Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Kennedy, 2005). Participants in the present study agree with the intensive coaching and mentoring, the weekly virtual instructional meetings, and the continuous

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checkups. One participant said, (1D-t2) "The good thing is that they give you an hour development for these coming weeks and then they'll check how it's going." As a result of the professional development's coaching and mentoring feedback, time for reflection, participants reported positive results in their students such as increased vocabulary and English acquisition, increased confidence, and even transitioning into an all English classroom.

Increased Teacher Confidence in Students' Outcomes as a Result of Virtual Professional Development (VPD)

The most important outcome of professional development (PD) is ultimately to increase student success. Behind student successes are the teachers powered by what they learn from PDs. Highly qualified and highly effective teachers are critical to student success because teachers are considered to have the strongest, most direct impact on student achievement (Akiba & Liang, 2016; Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Fennema, Carpenter, Franke, Levi, Jacobs, & Empson, 1996; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Tong, Irby, & Lara-Alecio, 2015; Soder, 1991). Of greater concern in the discussion of student successful outcomes and teacher preparation, is the continued achievement gap between English-dominant students and English Learners (ELs) (Crawford, Schmeister, & Biggs, 2008; Smith, 2014). Results from my study indicate that English learners were able to close the achievement gap and succeed in other subject areas parallel to their improved English language. One participant talked about their experiences, which reveal improvements in the closing of the achievement gap: (3A-p, p6) "There is really great vocabulary development…. I see that they are just about heads and shoulders above their peers who are already native English speakers."

Tong, Luo, Irby, Lara-Alecio, and Rivera's (2017) in their research talk about teachers' pedagogical practices being modified as a result of effective professional development consisting of ongoing teacher training embedded with coaching and mentoring on ESL strategies and vocabulary instruction significantly increased student achievement. Similarly, teachers in this study reported student academic improvements in English language development, reading, listening, and vocabulary, among other areas. Teachers (1B-t2 & 4A-t2, p1) particularly observed increases in English language acquisition to the extent that students were transitioning into all-English classrooms. One participant said: (4A-t2, p1) "I saw a big increase from the students from last year. They've already done the transition into the English, the ELLs…. They are even higher than the other students that were here in the all-English setting."

Furthermore, the data show that students not only made academic improvements, they also increased their self-confidence. Self-confidence is directly related to improvements in academics. When students feel successful in their learning, their self-confidence grows and they become more determined to learn even more (Moratinos-Johnston, Ballester Brage, Juan-Garau, & Salazar-Noguera, 2018).

 The following results from this study coincide with previous studies. The students grew more confident as they improved their English skills. Even though it was not a direct question, twelve of the 27 participants said that they observed their students more "self-confident," "comfortable," and "relaxed." One participant said the following regarding students' confidence and English acquisition: (4B-t1, p13) "…I would see them more confident because at the beginning they didn't want to speak English, but then towards the end, I would hear them having small conversations…" Based on these results, students of teachers in the program were observed to use English with greater confidence. Thus, the results from this study coincide with Moratinos-

Johnston, et al. (2018) pedagogical implications for teachers. It is important that teachers constantly reinforce students to increase their self-confidence in their learning.

Even though it is difficult to measure the overall effects of professional developments on student success (Krasnoff, 2015; Scribner, 1999; Scribner, 2003), teacher participants in this research study talked about their observed successes based on their professional development experiences, implementing PD practices in their classrooms, and their perceived improvements in their students' vocabulary, reading, and English language learning.

Implications

The results from my study have implications for future professional development research in particular virtual professional development (VPD) and professional development (PD) in general geared toward educators of English learners (ELs). These findings can be useful for policymakers, administrators, practitioners, experts, and teachers both for practice or to springboard for future research. Findings from this study add to the growing body of literature on best practices for VPD for teachers of ELs. The results from this study reveal that teachers find PDs more beneficial if they are research-based, structured, have classroom applicability, if teachers are allowed time to implement what they learned at PDs, have opportunities to collaborate with colleagues, if they can assess the effects of their implementation, and if they are sustainable.

Implications for Research Policy

The implications from a policy perspective are important because policy makers are beleaguered with options, decisions, and pressure often having to make decisions with incomplete pieces of information as in the case of education's professional development (PD) programs. Policy makers and administrators thus have to prioritize, optimize, and streamline PD. States require school districts to invest a percentage of their operating budget in the development of educators. According to Brand (1998), districts spend less than 15 percent of their technology budget on technology professional developments for teachers. Policy makers need to look at PD's pros and cons, and accountability measures should also be established to oversee how the resources are being allocated. Adey, Hewitt, Hewitt, & Landau (2004) suggest to first look at programs that promote collegial collaboration as opposed to individualism and a sense of ownership; assess the effects of the program, i.e., effects on student learning; ensure that the program provides a follow-up and assists teachers in the program implementation; and finally, look at the extent of change and innovation desired. Researchers have found that as with face-to-face collaboration, online professional development programs using an ongoing, intensive, and interactive learning community model are as likely to be successful or even more so than traditional face-to-face professional development programs that are fragmented and limited in time and scope (Dash, De Kramer, O'Dwyer, Masters, & Russell, 2012; Christensen, 2006; Harvey & Purnell, 1995; Reeves and Li, 2012). The results from this study coincide with previous research in that participants responded positively regarding their experience with the virtual professional development (VPD) programs. These findings agree with Reeves and Li (2012) findings in that participants have favorable attitudes towards virtual professional development (VPD), which is a positive outcome for the future of VPD and policymakers

invested in finding alternative and cost-effective modes of delivering professional development. Participants also had positive experiences with virtual collaboration with colleagues, virtual mentoring and coaching, they were able to assess the effects of the program, and they saw tangible results with improvements in students' learning.

Teacher turnover and attrition were not considered in this study. However, it is something to think about from the research perspective in that districts invest funds to provide professional developments to teachers. Districts spend between one and eight percent of their budgets on professional development (PD); nonetheless, it is difficult to assess the investment because of differences in definition of PD and differences in types of PD activities that each district undertakes (Miles, Odden, Fermanich, Archibald, & Gallagher, 2004). According to Miles et al. (2004), "the difference between two and three percent of a district's budget means millions of dollars to a district budget and thousands per teacher" (p. 3). District 1 from this study, for example, has a general fund of $157 million and $2.3 million (1.51 percent) are budgeted for curriculum/staff development; District 2 from this study has a general fund of $458.6 million and $2.5 million (0.58 percent) are budgeted for curriculum/staff development; District 3 from this study has a general fund of $93 million and $2.2 million (2.64 percent) are budgeted for curriculum/staff development; and District 4 from this study has a general fund of $390.7 million and $288,685 (0.08 percent) are budgeted for curriculum/staff development (TEA PEIMS District Financial Budget Reports, 2018-2019). Districts should, therefore, consider and invest in professional developments that will permeate and be highly transferrable to other districts, schools, grade levels, and subjects (Adey, Hewitt, Hewitt, & Landau, 2004). Sustainability of the VPD is also a significant aspect to consider to ensure a greater return on investment of the VPD program. Results from this study indicate that one year after the program was implemented, all

participants said that they continue to use the strategies at least in part; five of the 27 participants said that they continue to use the script; and eight of the 27 participants said that they continue to use the materials that were non-disposable or those they are able to buy more of such as dry erase markers. Practitioners should invest in PD programs that are research-based, cost-effective, transferrable, sustainable, provide tangible results, have proven to be successful, and are innovative in streamlining PD such as virtual professional developments (VPDs). Policy objectives should align with administrator objectives and teacher needs at the district and school levels.

Implications for Practice

The results from my study also have implications for professional development (PD) practice in regards to the collaborative planning between administration and teachers. Results from my study coincide with previous studies about the importance of allowing teachers to be involved in the planning of their own professional developments. Researchers found that professional developments are more successful when teachers are involved in the planning and decisions (Adey, Hewitt, Hewitt, & Landau, 2004; Bechtel & O'Sullivan, 2006; Brand, 1998; Drago-Severson, 2007; Trehearn, 2010). Even though time is often fleeting, experts and administrators responsible for the programming of PD should devote time and prioritize based on their available options and resources. Practitioners can also apply artificial intelligence (AI) practices to aid in evaluating and targeting teachers' areas of need to individualize the teacher's PD experience (Kulkarni, 2019). Results from this study coincide with the literature in that teachers participants that work collaboratively both with administration and colleagues continue implementing the change originally introduced, had more positive views about professional

development, were more willing to implement new ideas, revised existing ideas, and implemented more engaging experiences for their students (Bechtel and O'Sullivan, 2006; Goddard, Goddard, & Tschennan-Moran, 2007; Koch & Appleton, 2007; Lieberman & Miller, 2011; Louis & Marks, 1998; Moolenaar, Sleegers, & Daly, 2012; Saunders, Goldenberg, & Gallimore, 2009). Nonetheless, Adey, Hewitt, Hewitt, & Landau (2004) caution to trust in expert educators because they are in fact more knowledgeable in regard to what is more effective for pedagogy, and not to confuse teachers' wants with their actual needs to target at PDs. The successful implementation of PDs requires a balance of teacher involvement, leadership, and guidance. Efforts on behalf of teachers and particularly administration need to be focused on the facets of teaching that most impact the students and contribute to their greater success as students and individuals. Teachers need to be trained in technology to be prepared both for virtual professional developments (VPD) and to integrate technology in their classrooms (Brand, 1998; Delfino & Persico, 2007; Reeves & Li, 2012). Also important are the oversight of fidelity of implementation of PD programs, and the ongoing support provided to teachers in the form of coaching and mentoring. In the end, the results will be worth the time investment in planning, implementation, support, and assessment. However, more research is necessary on the effects of VPD, and in particular more innovative methods of PD, the effects on teachers and student achievement mainly of EL students.

Limitations

There are challenges in conducting professional development research because of the of teachers' level of cooperation, motivation, and the fidelity of implementation affect the outcome

of professional development (Tong, Luo, Irby, Lara-Alecio, & Rivera, 2017). Since professional developments are so vast and vary in length, subject targeted, method of delivery, intensity, materials provided, and so forth, it makes it difficult to measure the effects on teachers and student achievement. Additionally, there may be external variables that come into play when assessing the effectiveness of professional development programs on teachers and students. Even though my research study sheds some light into the intricate practice of professional development in education, there are limitations to my study. My research is limited in that it focused on the experiences of teachers who had participated in the English Language and Literacy Acquisition - Validation (ELLA-V) program in particular. Also, my research was qualitative in nature and the academic success of students was measured based on the perceptions of the teacher participants. Future research should look into the effects of other PD programs and compare the programs incorporating pre and post assessment measures.

Recommendations

My findings agree with previous research literature regarding the effectiveness of professional developments in that they need to be research-based, structured, ongoing, intensive, content focused and relevant to teachers individually, provide active learning, incorporate formal follow-ups/assessments, provide feedback, be consistent, sustainable, connected to the curriculum, meet the instructional needs of teachers, and provide support in the form of coaching and mentoring (Ball, 1996; Brand, 1998; Cohen & Mehta, 2017; Crawford, Schmeister, & Biggs, 2008; Harvey & Purnell, 1995; Hawkins & MacMillan, 1993; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Reeves & Li, 2012; Timperly & Alton Lee, 2008; Wilson & Berne, 1999; Tong, Luo, Irby, Lara-

Alecio, and Rivera, 2017). Research on the effects of professional development on teacher and student achievement is scarce, particularly of the effects of virtual professional development on teacher practice and English learners (Tong, Irby, Lara-Alecio, 2015; Tong, Luo, Irby, Lara-Alecio, and Rivera, 2017). Future research should focus on innovative research-based PD programs that foster collaboration, accountability, on-going learning opportunities, and that are content specific with a focus on language development for teachers of EL students. Future research can further focus on developments in the use of computer simulators with virtual humans, this technology can also be implemented into professional developments of teachers of EL and culturally diverse students to learn strategies and pedagogy (Kron, Fetters, Scerbo, White, Lypson, Padilla, Gliva-McConvey, Belfore II, West, Wallace, Gutterman, Schleicher, Kennedy, Mangrulkar, Cleary, Marsella, & Becker, 2017). According to participants in this research study, they considered the following to be the most important professional development components: (a) targeted PDs that are tailored to their needs, (b) PDs that provide support in the form of coaching and mentoring, (c) opportunities to collaborate with colleagues in learning communities, (d) time to assess the results of the professional development, (e) sustainable, and (f) tangible positive student outcomes. Through virtual professional development (VPD), teachers of EL students in this study received effective instructional strategies and continuous coaching and mentoring support regardless of their physical location. Future studies should focus on studying sustainable and innovative PD practices such as VPD and artificial intelligence geared toward teachers of EL students.

Conclusions

Findings from this study add to the body of literature that support that effective professional developments (PD) can modify teachers' instructional practices and subsequently improve students' learning if the PD is intensive, sustained, and content focused (Dash, De Kramer, O'Dwyer, Masters, & Russell, 2012). Teacher acquired knowledge and skills during this virtual professional development (VPD) are highly transferrable to all grades and subjects; it has practical classroom applicability; and, it is sustainable over time. Research findings indicate that we are moving in the right direction in regards to teachers' continuing education, and support the need for more research-based, targeted professional development practices that incorporate collaboration, ongoing learning opportunities, and accountability for teachers of English learner (EL) students. This research also supports previous studies in regards to teachers being the best and more readily available resources for improving student outcomes (Akiba & Liang, 2016; Dash, Kramer, O'Dwyer, Masters, & Russell, 2012; Fennema, Carpenter, Franke, Levi, Jacobs, & Empson, 1996; Irby, Sutton-Jones, Lara-Alecio & Tong, 2016; Tong, Irby, & Lara-Alecio, 2015; Soder, 1991). Even though technology is a great aid for teachers, it should not replace teachers (Kulkarni, 2019).

Based on my findings teachers are not only open to new and innovative learning opportunities, they long for it. Teachers desire professional developments (PDs) that are innovative, structured, targeted, that provide support, that are conducive to collaboration with colleagues, and that allow time for implementation and evaluation. Nevertheless, the work is never-ending, more work needs to be done in this area of PD in education, and more research is needed particularly in alternative modes of PD for teachers of EL students. As researchers and

experts, we need to continuously improve and research new methods of PD delivery, especially in the area of virtual professional development (VPD) and even in the arena of artificial intelligence (AI) in PD especially as applied to English learners. Findings from this study have theoretic and practical implications in regards to PD being promising to provide equitable pedagogy, elevate instructional practices for EL students, and reach the desired educational standards for EL students by implementing alternative methods of PDs such as VPD.

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APPENDIX

INTERVIEW PROTOCOL

1. Among these strategies, what are those you are continuing to use from those we worked with in ELLA-V? (Show the Card and allow teacher to share which strategies they are still using; once they respond, then ask—Please provide a couple of examples of how you have continued to use those)

2. Since completing the ELLA-V program, in what ways have you impacted your grade level and/or campus level in terms of what you learned from ELLA-V? In what ways have you shared the strategies you learned?

3. How did Project ELLA-V help you improve your teaching performance? Please provide examples of how you have continued to use ELLA-V curriculum and materials.

4. How did you perceive the real-time virtual coaching (coach talking through bug in the ear)? How do you think this would help you today in your classroom to improve your instruction if you could do this today?

5. Have you participated since ELLA-V in virtual professional development? Have you accessed our ELLA-Virsity online trainings? Would you participate in virtual professional development if you have the opportunity today? Why or why not?

6. What stories of improvement do you recall from ELLA-V that helped your students academically and/or in English language and literacy?

7. Are there any specific stories or reflections you have from ELLA-V that you would tell someone if he or she asked you to share about ELLA-V? (This could be a student story or your story.)