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LITERACYGROWS.ORG CULTIVATING AN ONLINE PLATFORM FOR TEACHING PROFESSIONALS: A FORMATIVE EXPERIMENT EXPLORING THE EFFECTIVENESS, EFFICIENCY, AND APPEAL OF A CO-CONSTRUCTED ONLINE PLATFORM FOR PROFESSIONAL DEVELOPMENT

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DISSERTATION

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A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Education in the
College of Education
at the University of Kentucky

By
Susan Jean Beckley Hart
Lexington, KY
Director: Janice F. Almasi, PhD
Lexington, KY 2012

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The purpose of this formative experiment (Reinking & Bradley, 2008) was to describe the stages of development of an online platform that cultivated the growth of an online community of practice for teaching professionals. One hundred and forty-eight elementary school professionals participated in this study. Relying primarily on qualitative data, an iterative process of data gathering, analysis, and reflection was used prior to, during, and after the implementation of the intervention, LiteracyGrows.org, to describe performance and determine progress toward the pedagogical goal.

Qualitative data were coded for recurring themes derived from the following sources: interview data, user-profile information, Google Analytics, email correspondence and open-rates, webinar archives, heat map data, and a researcher reflection journal. Micro-analysis revealed that the success of the intervention was related to the usability and sociability of the platform. It was easy to navigate and appealed to teachers as a social networking tool that was only for education professionals where they could share information and attend live or archived webinars to extend learning. Reflection on a macro-level was used as a tool to further explore LiteracyGrows.org as a model of professional development. Specifically, how it was situated within the larger landscape of professional development and what it offered in terms of alignment between learning theory, epistemology, and model of professional development and communication, worldview, and knowledge. These constructs were important factors to consider in creating a platform for meaningful dialogue and professional growth to take place.

LiteracyGrows.org provides the foundation for future research to further explore how online professional platforms can be utilized to make professional development an on-going and sustainable component of support and growth for education professionals. The growth of online professional platforms by educators will also shift the conversation of professional development further away from delivery and more toward meaningful

engagement by educators as active participants in their own knowledge construction. Recommendations include the continuation of the discussion of professional development in terms of epistemological alignment. This study highlights disconnect between teachers and their professional development experiences when expectations, perceptions, and understanding of what they are engaging in for growth do not align. Furthermore, re-constructing the way professional development is embedded within practice to better engage the 21st Century teacher using up-to-date technology.

KEYWORDS: Professional development,
formative experiment, literacy, and
online community of practice

Susan Jean Beckley Hart
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June 19, 2012
Date

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and Definitions

"The only reform that stands any chance of making our public schools better is the investment in teachers—to aide them in their quest to understand, to learn, to become more compassionate, caring, and competent persons" (Glass, 2008).

The National Center for Educational Statistics conducted a survey of teaching professionals that concluded the typical teacher spent approximately one day a month in professional development, while only 18 percent of those teachers felt their professional development was connected to their school improvement; moreover, only 10 percent to 15 percent, depending on the content area, reported that follow-up materials or activities were provided and only 12 percent to 27 percent stated that their professional development sessions improved their teaching (NCES, 2001). This report aligns with various other studies in the area of teacher professional development that describe the deficiency in various professional development models to produce optimistic results (e.g. . Darling-Hammond, 1997; Doubek & Cooper, 2007; Schrum, 1999; Slepkov, 2008). While professional development is considered essential within the profession of teaching, the means by which professional development is effectively implemented has not been determined.

Currently, the International Reading Association (IRA) is working with various lawmakers to provide support as they work to pass the new Literacy Education for All, Results for the Nation (LEARN) Act that would provide additional monies for literacy professional development (Bell, 2009/2010); this study falls at a time in literacy education when innovative ways to engage the 21st century teacher in collaborative and reflective professional development is needed within the field of literacy education research. Moreover, professional organizations such as the IRA are finding that membership has significantly decreased from 88,000 members in 2005 to 66,000 members in 2010, and members increasingly want to participate in activities that focus on their needs and are available at times that are most convenient to them (Almasi, 2010, personal communication). As society has evolved to focus more on the autonomous individual, the way in which professional development is provided and how it is studied is still trying to adjust. This is one factor that has contributed to disconnect between what

teachers expect from their professional development and how professional development is delivered. While there have been many attempts in the past to make professional development more meaningful, the quest to find a model that works is still considered to be important by leading literacy researchers, as noted in the annual "hot or not" column that reported at least 75 percent of respondents were in agreement that professional development "should be hot" (Cassidy & Cassidy, 2010). While the questionnaire does not represent a random sample and suffers from the concomitant problems associated with it such as sample bias, it does reaffirm that literacy researchers feel that more needs to be done in their area of literacy teacher professional development.

Specifically, my research interest lies within the investment of teachers, working to create a professional development website where teachers can reclaim some of their autonomy. In this study, I co-constructed an online environment with teachers where they actively engaged in their own knowledge construction to grow as teaching professionals. This study describes the stages within the development of the online platform LiteracyGrows.org, an online space where teachers discussed their needs, collaborated to answer questions, and provided an online space where educators could critically reflect upon their professional practices. It also reports adjustments made to the website along the way to better meet the needs of teaching professionals.

Historical Background

Professional development has been seen as a necessary part of the profession of teaching, while those within education have not agreed upon the means of implementing of professional development (e.g., Schrum, 1999; Smyth, 1991). Various researchers have different viewpoints on how professional development should be implemented within schools. Many within the world of education have viewed professional development as a lifelong endeavor necessary within the changing knowledge base of best practices within teaching and learning (Bailey, Curtis, & Nunan, 2001; Guskey, 1995). Underlying this belief is a need for professional development because teaching and learning are very complex, and continued growth to understand the processes associated with teaching and learning is what a true education professional needed to do to stay current. This perception however represented a positive view of the role of the education professional and their responsibility within their own improvement. Giroux

(1988) contended that the role of a teacher as a knowledgeable professional who could offer expertise about education had been ignored within the process of building our education system. Instead of an active participant who had expertise to share within their construction of new ways of teaching and learning, Giroux believed that a teacher was viewed instead as someone who merely implemented what they were told to and was no longer given the opportunity for critical thinking.

This conception of a teacher paralleled the machine-oriented perspective of the role of a teacher that dominated society in the past and still has traces today. In this understanding of teachers they were merely viewed as intermediaries who were there to ensure the production of satisfactory products (Greenberg, 1983). The products in this perspective were the students and the rote memorization of knowledge that the teachers passed on to them.

Perpetuating this perception of a teacher were beginning models of professional development, process-product models, which sought to provide teachers with the information so that they could implement it within their classrooms (Cochran-Smith & Lytle, 1993; Shnellert, Butler, & Higginson, 2007). Such models were viewed as highly de-contextualized in-service professional development models that were dependent on an outside "expert" to provide information, while little to no follow-ups were received after teachers listened to the presentation. Walpole and McKenna (2004) stated that the problem with these types of models of professional development were that they did not connect understanding of the school curriculum to the information they were providing to teachers so change did not occur. Teachers viewed such in-services as meaningless because they were not able to interact within the sessions, they were merely told what to do, and if confusion happened when they went back to their classroom to implement the new strategy, they were told no one was there to help them. This conception of professional development was viewed as removed from what the teachers really needed in their daily teaching therefore other models were developed to attempt to make professional development more effective.

Eventually, researchers started to transition into the understanding that professional development needed to incorporate more contextual components, which would make professional development sessions more transferable to practical use within

the classroom setting. Hargreaves (1995) stated that the focus of teacher development needed to become more than just lessons about knowledge and/or skills, but about the moral, political, and emotional dimension of teacher development (p. 14). Researchers advocated for the use of context specific situations to be used so that teachers could further their understandings about how to refine their teaching techniques. Holly and Mcloughlin (1989) stated that this transition demonstrated the progression of teachers being viewed as trainable, to teachers needing development. Professional development was once viewed only as a means to train teachers—to provide knowledge that they would then attempt to disseminate within their classrooms. This conception changed later to include more recent models that focused on the development of the *teacher-as-researcher* (Tillema & Imants, 1995).

Tillema and Imants (1995) defined the transitions between models of professional development as falling into three categories: (a) *dissemination model*, (b) *interactive model*, and (c) *teacher-as-researcher* or *inquiry model* (p. 147). The *dissemination model* would align with the one-shot models of professional development that treat the teacher as an object, someone to train who does not need to think critically about the information she was provided. An expert would deliver information to teachers and they were expected to take the information they were given and implement it without question.

The *interactive model* encouraged teachers to think about implementation. Professional development programs that include literacy coaching would be an example of the interactive model of professional development. Programs that employ this model of professional development provide teachers with knowledge that come from relevant research related to teaching and learning strategies. The teachers interact with the information in a problem-solving manner. They are encouraged to ask questions and discuss when and how certain strategies would be good to use, but in the end teachers are still not considered in charge of their own knowledge development, answers are provided to them.

The last model, *teacher-as-researcher* or the *inquiry model* hoped to relinquish control to the teachers so they could become the ones who were able to construct their own ways of knowing. Models of professional development such as teacher study groups (Joyce, Murphy, Showers, & Murphy, 1989) were created in an attempt to design

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professional development that would allow teachers to produce their own knowledge. The ideal conception of such groups were that teachers would work together in groups to discuss possible questions or concerns within their own teaching and learning and begin to create new ways of solving such issues.

Each of the three models of professional development positions the teacher differently as it relates to the nature of knowledge. Researchers acknowledge that more needs to be known about whether knowledge is validated or constructed as it relates to professional development (e.g. Cochran-Smith & Lytle, 1990; Yarger & Smith, 1990, Katz & Raths, 1991, Tillema & Imants, 1995). These researchers also agree that it is important to understand what teachers know in order to construct future models of professional development. In their understanding, it is important to recognize what teachers already know as a means to better understand what knowledge needs to be *delivered* to teachers next. Instead of discussing this knowledge as something the teachers can be responsible for constructing, Tillema and Imants contend that professional development can still be presented to teachers in the form of training (p. 148). They discuss these three models of professional development as activities to do within professional development models, but in the end the purpose of professional development is to "train" teachers. Learning may occur along the way, but the end goal is still to get teachers to implement new practices that are presented to them.

Guskey (1995) called for an *optimal mix* in the way models of professional development were utilized. Similar to the concept presented by Tillema and Imants (1995), Guskey believed that these three models could be used together as new knowledge was *delivered* to teachers. While teachers could interact with knowledge and in some models such as study groups, were able to generate their own concerns or issues, inevitably these models all relied heavily upon the dissemination of knowledge and the conception of professional development that treated the teachers as "trainable." Although these models of professional development are presented to teachers as interactive or inquiry-based, in practice most models revert back to the use of training teachers instead of providing opportunities for teachers to create their own knowledge.

After reviewing past and present models of professional development, Webster-Wright (2009) believed that professional development had become too hyper-focused on

content delivery to teachers instead of focusing on the professional learning of teachers. Models of professional development might allow for interaction and limited reflection, but more needs to be known about how knowledge is positioned in relation to professional development models. As professional development is be presented to teachers as following an *interactive model* or an *inquiry-based model*, more needs to be known about how each model actually positions the knower and the known as it is implemented. Professional development needs to be explored in terms of how individuals are learning, not only in terms of how well they implement strategies. The way in which literacy researchers explore professional development needs to transform to better understand how knowledge and learning are positioned within each model of professional development as it occurs in an ideal state or in actual practice within schools. By shedding light on how knowledge is positioned within professional development models and determining what learning theories that are perpetuated by models of professional development, more could be learned about effective, efficient, and appealing professional development.

One-shot models of professional development align with the dissemination model that position knowledge outside of the teacher, whereas models that include apprenticeship, mentoring, and coaching have attempted to create models of professional development that value the teacher as an active participant but in actual implementation fall short of accomplishing this goal. Cochran-Smith and Lytle (1993) further conceptualized the role of professional development and stated that the beliefs and values teachers hold in relation to teaching and learning affected their perceptions and actions within a classroom. Professional development could either positively affect their self-perception or further embed negative feelings about their role. Cantrell and Hughes (2008) asserted that extended professional development did positively affect teachers' feelings of efficacy related to their ability to implement literacy strategies. Such on-going models of professional development were providing the foundation for teachers to transition from the negative stereotype of a "trained" professional into a perception of the role of teacher that came closer to meeting the role of a self-reflective practitioner. The interactive and teacher-as-researcher or inquiry models that include extended professional development, literacy coaches, modeling, and discussion were considered to be more

collaborative and allowed for more authentic participation on the part of the teacher but as will be described throughout Chapter Two do not succeed in positioning the teacher as an active participant crucial within the process of their own knowledge creation. The social nature of learning does not come to fruition, which hinders true construction of knowledge. Future research related to professional development should not just describe what activities occur within models of professional development, future research needs to begin to explore models of professional development in relation to how epistemology and learning theory are situated within each model of professional development.

Rationale

As an *optimal mix* was written about as a goal for professional development, various programs have tried to incorporate different methods of professional development within schools. Some have also urged for the culture of schools to be studied to identify obstacles that may hinder the ability for more progressive professional development models to take shape within these school environments (e.g., Darling-Hammond & McLaughlin, 1995; NCES, 2001). Other researchers began to focus on professional communities of practice to advance school-wide change, they started with in-person groups as a way to forge this new type of community of practice (e.g., Craig, 2009; Curry, Jaxon, Russell, Callahan, & Bicais, 2008; Ladson-Billings & Gomez, 2001; Williams, Brien, Sprague, & Sullivan, 2008), and as time has progressed professional communities of practice have even transitioned into online settings (e.g., Huai, Braden, White, & Elliott, 2006; Hur & Brush, 2009; Vavasseur & MacGregor, 2008). While the space of where professional communities of practice have changed, researchers are still trying to determine what content should be provided and how the information could be shared. This study bridges the gap that currently exists between what information is shared within professional development and how this information is communicated with teachers by situating the teacher as an active agent within the construction of her own professional learning.

Research now recognizes that collaboration and reflection are crucial in the development of a teaching professional (e.g. Poglinco, Bach, Hovde, Rosenblum, Saunders, & Supovitz, 2003; Schnellert, Butler, & Higginson, 2008; Slepkov, 2008) and they have worked to infuse these attributes within their professional development models.

As professional development models have transitioned from one-shot models of delivery into in-person mentoring or coaching, to models that are attempting to change the entire culture of a school into a professional community of practice that foster collaboration (DuFour & Eacker, 1998) it is important to understand what a community of practice is within the context of professional development for this study.

Wenger (1998) posited that a community of practice should be a triangulation of individuals engaged in *joint enterprise, mutual engagement,* and *shared repertoire* sustained by a relationship of who they are, what they do, and how they negotiate meaning. Communities of practice are not just a group of people gathered together; their intentions must interconnect for the purpose of sustained constructive active participation. Thomas (2009) extended this conception of community of practice by stating that involvement in such interactive and purposeful groups provided individuals with an empowering opportunity to express themselves. While communities of practice are present within everyday lives, intertwined in all aspects of life the expansion of where communities of practice can occur has gotten bigger as the world of technology has provided space for such active participation and interaction between individuals to take place online.

While communities of practice have been around for some time and previous models took the form of teacher study groups or teacher inquiry groups, DuFour and Eaker (1998) moved the discussion of communities of practice into the school setting, which they contended altered the culture of a school to be more collective and allowed for more authentic learning experiences for teachers. Sergiovanni (2000) furthered their position by agreeing that creating a community of practice was essential to improving a school. Such communities of practice fostered a school-wide environment that led to an increase in teacher collaboration.

Not only have in-person communities of practice sought to improve the ways in which teaching professionals collaborate, but supplemental online models and online communities have also been used as a means for collaboration. Vavasseur and MacGregor (2008) focused on the use of an online community of practice as a supplement to just-in-time learning and content focused inquiry groups. It is within this vein that I hope to extend the work of Hur and Brush (2009) and Lui and Tsai (2006) and

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fill a gap that exists in current professional development research by creating an online professional community of practice *with* teachers *for* teachers that cultivates their growth as teaching professionals through active collaboration and reflection. Hur and Brush (2009) only explored pre-existing online communities of practice related to teachers that were not specifically related to literacy teacher development. Moreover, Lui and Tsai (2006) explored college students' interactions and argument resolutions, but did not articulate what new ways of knowing spawned from these interactions. After analyzing and critiquing the research literature between communities of practice, professional development, and sustainability of online communities, it is clear that a gap in the research exists in the area of identifying the construction of new knowledge. Instead of developing a website that only delivers content and allows for limited collaboration, LiteracyGrows.org hopes to cultivate a community of education professionals by providing a space where teaching professionals can create content, share ideas, engage in critical discussions, actively collaborate, and reflect upon best practices. Using the foundations of sociocultural theory (Vygotsky, 1978) and metacognition (Brown, 1987) to describe the constructs of collaboration and reflection, this study theoretically grounds these constructs and situates them within the essential features of an online environment that fostered the empowerment of a 21st century teacher.

Purpose

The purpose of this formative experiment was to actively co-construct an online platform that would foster the foundation for a community of practice that cultivated collaboration and reflection. Features of this online professional development platform included: (a) interactive discussions, (b) online webinars, (c) archived webinars, and (d) online space for sharing information/documents. Users were able to share information between themselves, receive information from webinars, and find out new information from online education blogs that were embedded into their professional development platform. Teachers voted on all webinar topics and the blogs embedded into the platform were also all recommended by practicing education professionals.

Ball and Freedman (2004) posited that empowerment was a state of feeling smart, when an individual had the resolve to take on intellectual challenges. By creating a model of professional empowerment that cultivated collaboration and reflection, I

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hypothesized that teachers would begin to have more positive feelings about their abilities and would increase the level of interactions between, around, and by these teaching professionals to increase their ability to take on intellectual challenges. This study explored the effectiveness, efficiency, and appeal of a co-constructed online platform that relies upon user generated content and feedback.

Unlike many other types of research that begin with specific research questions, formative experiments focus on achieving a valued pedagogical goal and are guided by broad questions aimed at revealing how an intervention can be implemented to achieve them. Each question was answered within their respective chapters to compile a report describing the creation, implementation, revision, and outcome of this formative experiment. The following six questions introduced by Reinking and Bradley (2008) provided the guiding foundation for designing and conducting this specific formative experiment:

1. The pedagogical goal was to cultivate an online platform for professional development and support for educators. Specifically, why and in what ways was professional development valued and important? What underlying theory was integral in constructing meaningful professional development experiences for educators?

2. Does the intervention, LiteracyGrows.org align with the guiding theories presented within this study to achieve the pedagogical goal and why?

3. What factors enhanced or inhibited the effectiveness, efficiency, and appeal of the intervention, LiteracyGrows.org in regard to achieving the set pedagogical goal of positively impacting educators' perceptions of professional support?

4. How can the intervention, LiteracyGrows.org be modified to achieve the pedagogical goal more effectively and efficiently and in a way that is appealing and engaging to all stakeholders?

5. Has the instructional environment changed as a result of the intervention, LiteracyGrows.org?

6. What unanticipated positive and negative effects does the intervention, LiteracyGrows.org, produce?

Definition of Terms

Agent of Change: Agent of Change was the role of the researcher within formative experiment. This role allowed the researcher to be an active participant in the construction, collaboration, and content development of the intervention. Reinking and Bradley (2008) stated that this role is when a researcher works with participants to bring about "positive change" working with the participants to achieve a common goal.

Community of Practice: In this study, a community of practice was used as the foundation for what this platform could help foster. An online space where teachers actively engaged in the creation of LiteracyGrows.org and worked together to co-construct the initial stages of an online professional community of practice where they could collaborate, reflect, and engage in meaningful dialogue working towards new ways of knowing. Communities of practice are not just a group of people gathered together; their intentions must interconnect for the purpose of sustained constructive active participation. Wegner (1998) posited that a community of practice should be a triangulation of individuals engaged in *joint enterprise, mutual engagement,* and *shared repertoire* sustained by a relationship of who they are, what they do, and how they negotiate meaning.

Formative Experiment: Formative Experiment was the design employed within this study. Its iterative processes allow for the creation and continued modification of LiteracyGrows.org as a useable platform for teaching professionals to interact. Reinking and Bradley (2008) stated that it was a research methodology aimed at developing, testing, and refining pedagogical theory to determine: (a) *what factors enhance or inhibit an interventions effectiveness in achieving a valued pedagogical goal* and (b) *how the intervention, in light of those factors, can be implemented more effectively.*

Intervention: Reinking and Bradley (2008) described an intervention as fundamental component of formative design. Moreover, they posited that there were three types of interventions: "(a) *a single, well-defined instructional activity, usually implemented during a specific time in the schoolday,* (b) *a change in the physical or organizational environment of the classroom,* or (c) *a coherent collection of instructional activities aimed at accomplishing a specific instructional goal."* Using these as guideposts, this study conceptualized the intervention to align with the third definition put forth by these

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researchers, which depicted the intervention as a coherent collection of instructional activities, but instead of the focus of such activities being applied to students, this study sought to provide a platform that discussed instructional strategies, their theoretical foundations, questions of applicability, and accessibly as it related to teachers who were collaborating within the online platform of LiteracyGrows.org.

Literacy Coach: An education professional focused on the implementation and dissemination of reading strategies to teaching professionals. The International Reading Association (IRA) defined a literacy coach as a reading specialist who (a) *provides support to teachers,* (b) *assumes a leadership position to implement long-term professional development,* and (c) *has sufficient experiences with the age/grade level that they are providing support to within their position, which may allow them to be more effective* (International Reading Association, 2010).

Webinar: A web conferencing event that can occur asynchronously or synchronously where participants linked to the conference via the Internet to interact with presenters and attendees

Chapter Two: Pedagogical Goal, Historical Overview, Epistemological and Theoretical Considerations, Review of Research

"The 'just a teacher' mindset will not likely go away soon, but it certainly will not go away until those of us in the profession redirect our own thinking on the matter" (Norris, 2002, p. 19).

In this chapter I discuss the historical overview of professional development and describe the importance of epistemological and theoretical alignment as it related to the current research of professional development and online communities of practice. The purpose of this chapter was to review the literature that supports the answers to the first question in the framework for conceptualizing and conducting formative experiments (Reinking & Bradley, 2008):

1. The pedagogical goal was to cultivate an online platform for professional development and support for educators. Specifically, why and in what ways was professional development valued and important? What underlying theory was integral in constructing meaningful professional development experiences for educators?

Pedagogical Goal

The pedagogical goal, or purpose of this formative experiment was to implement an online platform that could foster the development of an professional community of practice that was actively co-constructed with elementary literacy teachers to cultivate professional development focused on literacy growth in a new and innovative manner; furthermore, this formative experiment hoped to utilize an iterative process as a means to identify issues within the intervention of LiteracyGrows.org, propose possible solutions, and continuously document this process as it unfolded and transformed to meet the needs of teaching professionals (Reinking & Bradley, 2008). This study sought to better understand what teachers consider effective literacy professional development and what it was that possibly affected the successes or challenges related to an online, interactive professional community of practice.

Introduction

It was critical in understanding professional development to first understand the historical perspectives that have influenced the types of professional development models

implemented within schools and this begins with understanding the contrasting views of a teacher. This section begins by defining two views of what a teacher was considered to be and then will embarks upon a discussion of how these views of a teacher and the types of professional development models are interconnected and have perpetuated one another over the past several decades. Moreover, this overview was grounded in previous reviews of literature that called for the need of more research in the area of literacy professional development (e.g. Anders, Hoffman, & Duffy, 2000; Correnti, 2007). Correnti specifically wrote about the need for more research into professional development focused on literacy strategy instruction. The following historical overview and review of research excludes math and science professional development models and focuses on elementary teachers' professional development related to literacy growth. In culmination, this overview of professional development describes where we are situated today in the great debate of professional development and the crossroads that will either define the future of education or perpetuate the current state of affairs.

Historical Overview

As previously stated, there are contrasting views of the role of a teacher. These dichotomous ways of defining a teacher have been present throughout history. As far back as Joseph Lancaster (1778-1836) accounts have revealed that as an attempt to ensure the best quality of instruction teachers were trained as a means to ensure the best quality of instruction. Within this perception, teachers were told what to implement by their superiors and were expected to do so without question (Tickle, 1989). Within this "trainable" conception of a teacher, teachers were viewed as part of a machine. Teachers were merely there to do what they were told and disseminate knowledge to children, not to critically reflect or think about various perspectives of how they taught or learned. In contrast, others believed that teaching was an art and that the professionalization of teaching needed to be done by cultivating a teacher's intellect and beliefs while fostering reflection upon their own teaching techniques (James, 1899/2001; Sockett, 1985). Within this progressive outlook, teachers were professionals who assumed responsibility for their growth, development, and understanding, not constantly relying upon others to provide the information to them as a means for development. These two perspectives of the role

of a teacher provide a foundation for conceptualizing how a teacher was positioned in relation to various models of professional development.

The contrasting views of the role of a teacher can be paralleled to models of professional development discussed by Tillema and Imants (1995). Tillema and Imants, as described in Chapter One, defined the transition between models of professional development as falling into three categories: (a) *dissemination model*, (b) *interactive model*, and (c) *teacher-as-researcher* or *inquiry model* (p. 147). These three models can be described it terms of how they either perpetuated the perception of teachers as trainable, or attempted to develop a model of professional development that tried to acknowledge the experiences and expertise of teaching professionals.

While Tillema and Imants (1995) described three various professional development models that positioned the teacher in a certain light as either trainable or self-reflective and responsible for their own growth, they also attempted to advocate for the use of training models of professional development that acknowledged what teachers' prior knowledge was in relation to their ability to progress in development. While Tillema and Imants recognized that knowledge played a part in how a person learned, they did not take their analysis to the level of considering the underlying epistemological connections in relation to these models of professional development. Epistemology is the study of the nature and scope of knowledge (Cunningham & Fitzgerald, 1996). While it is important to link how a teacher is perceived to the expectations set forth within their professional development and the importance of their prior knowledge, professional development also needs to be explored in relation to the nature of learning and where knowledge is situated. If more were understood about how various models of professional development position knowledge in relation to the teacher, more could be learned about the disconnect that teachers feel in connection with professional development. As models of professional development attempt to provide more time for interaction and authentic experiences, in practice if teachers feel that their involvement is not meaningful and that the model of professional development is mostly relying on a dissemination model of professional development tension and frustration builds in relation to professional development. If teachers are never viewed as a meaningful part of their own knowledge creation they inevitably they will feel disconnect between theory

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and practice. It is important to understand the nature of knowledge in relation to models of professional development to begin to design models that are cohesive between what they purport and what they are in implementation.

Webster-Wright (2009) wrote in depth about the need to re-evaluate the way that professional development is conceptualized. Within her review of research she described the overwhelming failure of professional development within education. Webster-Wright contended that too many professional development models focus on providing content instead of fostering learning. She posited that placing emphasis on content over learning in authentic context is engrained in professional development and perpetuates the epistemological belief that knowledge is separate from the learner and can be provided to them. Within this view, the teacher is always recognized as a professional lacking in ability and in need of being fixed. Klein (2001) noted that the label, "professional development" implies the insufficiency of professionals, assuming they need "development." Instead of focusing on the authentic context in which professional learning occurs, taking into account the experiences and knowledge of professionals and how these knowledge pieces interact with other knowledge in the process of learning, many professional development models are only concerned with the way knowledge is disseminated to professionals and not in the growth and cultivation of a lifelong learning professional. While Webster-Wright supports further research into the context and ontology of professional development, it is my assertion that we need to begin to explore the epistemological assumptions associated with current models of professional development to better understand how various professional development models position the knower and the known. The knower in the case of literacy professional development is the teacher and the known is the content that is disseminated to these teachers. The interplay between how professional development models position the teacher and content, or the knower and the known needs to be more fully explored to better understand the underlying epistemological positions that either value a teacher as an active participant in their knowledge construction or devalue them as objects meant to only do as they are told without critical reflection or active participation. This deeper conceptualization of professional development will allow researchers to extend the conversation of professional development to include the importance of authentic

contexts, collaboration, active engagement, and creation of knowledge versus the evaluation of how well professional development delivers information to teaching professionals.

Furthermore, as professional development begins to be re-conceptualized in terms of epistemology, it is also essential to better understand the learning theory that underlies models of professional development. Learning theories, as well as models of professional development and epistemological positions have tenets that either value the teacher as trainable, or acknowledge them as self-reflective and responsible for their own learning. By understanding the connection between models of professional development, epistemology, and learning theory, more can be understood about why certain models of professional development result in frustration and disconnect on the part of the teacher. For example, if a model of professional development purports that it will be collaborative, self-regulated, and interactive and in practice relies heavily on an expert disseminating knowledge tension and frustration increases.

The purpose of the following sections: (a) *epistemological considerations* and (b) *learning theory connections* is to define and outline how epistemology and learning theory will be used as lenses to shed more light on the way in which professional development needs to be viewed to better understand its effectiveness. These sections are followed by an in-depth discussion of the three models of professional development (*dissemination, interactive,* and *teacher-as-researcher or inquiry-based*) and how each model can be aligned with epistemology and learning theory.

Epistemological Considerations

Epistemology is the study of knowledge that includes: (a) *assumptions people hold about the basis of knowledge,* (b) *the form it takes,* and (c) *the way in which knowledge may be communicated to others* (Dillon, O'Brien, & Heilman, 2000). It is essential to further understand the implications of knowledge in relation to the underlying assumptions of knowledge and in turn the way that knowledge is communicated to others as the field of literacy research progresses specifically within relation to professional development to fully conceptualize the affects of teacher growth. Cunningham and Fitzgerald (1996) believed that in exploring epistemological beliefs that underlie various theoretical views of reading more could be understood about the link between theory and

practice. This same concept, the importance of epistemology in bridging the gap between theory and practice will be used in this study to better understand how the epistemological underpinnings of professional development affect the way in which teaching professionals learn.

Cunningham and Fitzgerald (1996) in a seminal article highlighted three overarching concerns that were essential in exploring the nature of knowledge: (a) *what constitutes or counts as knowledge,* (b) *where knowledge is located,* and (c) *how knowledge is attained"* (p.40). In order to fully conceptualize these three constructs Cunningham and Fitzgerald created a map that helped them understand their construction of the theory of knowledge. The map included seven questions, which were derived from the three previously mentioned foci questions used to study epistemology. The following table outlines where the seven questions fit within the three broad issues addressed above.

Table 2.1

"Seven main issues and three overriding concerns in epistemology" (Cunningham and Fitzgerald, 1996, p. 41)

What constitutes or counts as knowledge?

      Issue 1: Can we have knowledge of a single reality that is independent of the knower?

      Issue 2: Is there such thing as truth?

      Issue 3: What primary test must proposed knowledge pass in order to be true?

      Issue 4: Is knowledge primarily universal or particular?

Where is knowledge located?

      Issue 5: Where is knowledge located relative to the knower?

How is knowledge attainded?

      Issue 6: What are the relative contributions of sense data and mental activity to knowing?

      Issue 7: To what degree is knowledge discovered versus created?

Cunningham and Fitzgerald (1996) answered these seven questions in relation to clusters of epistemologies: (a) *positivism/radical empiricism,* (b) *hypothetico-*

deductivism/formalism, (c) *realism/essentialism,* (d) *structuralism/contextualism,* and (e) *poststructuralism/postmodernism.* In following their format, the same steps will be taken later in this chapter to explore the three models of professional development as they relate to epistemological positions. By using the epistemological map created by Cunningham and Fitzgerald, assumptions were made to determine *what counts as knowledge, where knowledge is located, and how knowledge is attained* as it relates to professional development and the interplay between teachers and content, or the knower and the known.

<div align="center">

Learning Theory Connections

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The three learning theories that are discussed in relation to professional development and the nature of knowledge are: (a) *behaviorism,* (b) *cognitivism,* and (c) *social constructivism.* Guskey (2000) wrote that it is critical to continue to learn more about the way individuals "acquire new knowledge, skills, and attitudes" as it relates to professional development so that we can adjust to make professional development more effective. Researchers cannot only evaluate how well teachers are receiving information and implementing what they are told; they need to begin to explore the underlying learning theories that are utilized by various professional development models. In better understanding these three learning theories, perhaps more can be learned as to how to positively affect the effectiveness, efficiency, and appeal of professional development in the future. While the purpose of this section was to explain three particular learning theories, the next section will unite models of professional development, epistemology, and learning theory together to provide an in-depth analysis of how the ideal implementation of models professional development varies substantially during in-practice implementation.

Behaviorism

Behaviorism is a learning theory that denotes the learner as someone who merely acts or reacts based on stimulants. Cole and Scribner (1978) provided a historical overview of the transitions between learning theories as an introduction into Vygotsky's, *Mind in Society,* and first described the work of Darwin, Fechner, and Sechenov who all emphasized natural law and the comparison of human's mental processes to animals. Behaviorism stems from such perceptions of mental behavior, as Skinner (1938)

proceeded to conjecture that an animal's rate of response was based upon a stimulant provided to a subject. Animals and/or humans would learn to act based upon conditioning and the eliciting of a response.

Skinner (1953) stated that the science of learning was an "attempt to discover order, to show that certain events stand in lawful relations to other events" (p. 6). Skinner believed that positive and negative stimulants could be used to get an individual to respond in a certain manner. Within this conception of learning, an individual would not have free will or autonomy; they were destined to react in a given manner based on the conditions set forth. Notions of critical thinking or self-reflection were not plausible within a behaviorist environment. Conditioning and outside control were considered to be inseparable from human nature.

A learning environment that perpetuates the principles of behaviorism would not view learning as a process. An in-service models of professional development that treats the teacher as an object who is deficient in its knowledge based, unable to be responsible for their own growth (Guskey, 1995) would align with this learning theory. Moreover, such an environment would devalue the social nature of learning and the ability to create knowledge. Behaviorists tend to believe that all learning is a conditioned behavior and that an individual's actions can stand alone—mental processes, or internal dialogue are not at all founded within this learning theory (Rayner & Pollatsek, 1989). Within this learning theory, learners are considered to be objects. Learners can be told what to do and will act without thought or reflection to carry out what they are conditioned to do by those in control. Knowledge is something that is provided to them, learners are considered to lack the ability to critically engage with a problem and change their response based on their own free will.

Cognitivism

As time progressed, theorists became discontented with the notion that all mental functioning was in reaction to positive or negative reinforcement. Chomsky (1959/1996) wrote a review that strongly criticized Skinner and the behaviorist notion that humans could be studied like animals. Furthermore, his critique noted that Skinner did not believe in the hypothetico-deductive model of theory testing, which in his eyes further devalued Skinner as a scientist. With his critique of Skinner and his counter argument of

the behaviorist notion of learning, Chomsky was considered to have led the transition into cognitivism.

The cognitivist learning theory has been described as the study of how learners' knowledge changes as a result of cognitive strategies (Mayer, 1987). Specifically, cognitivism focuses on examining how various kinds of knowledge (e.g. sematic, procedural, and strategic) changes overtime and is manifested in learning. Also important to such mental processes are short-term and long-term memory. As compared to behaviorists, cognitivists recognize that there are *internal* and *external* processes that occur throughout learning (1987). Learners are encouraged to interact with knowledge, but are not expected to create knowledge based on experiences.

Mayer (1987) noted that there are three general conditions for meaningful learning to occur: (a) *reception of material to be learner,* (b) *availability of appropriate knowledge for processing the material,* and (c) *activation of this knowledge during learning* (p. 17). Given these three conditions to learning, it is evident that learners are expected to receive knowledge and interact with it so they will be able to recognize when it is most conducive to use the provided knowledge. Smith and Neale (1989) designed a *training model for conceptual change* model of professional development that relied heavily on cognitive tenets. Teachers were given new information about a strategy and through careful testing and use of the strategy replaced their previous conception of strategy instruction with a new strategy to use within their classroom. This strategy recognized that teachers needed to not only be told what to use, but also needed ample time to interact with the new information so that a new way of understanding could take shape. While this learning theory does extend the behaviorist model by acknowledging the existence of internal processes, the cognitive model still provides knowledge to learners. Knowledge is not created; it is received by the learner and then activated by a stimulus and response conception of when and how certain knowledge should be used.

Social Constructivism

The third learning theory is social constructivism, which stresses the importance of the social nature of learning. Vygotsky (1978) contributed to the understanding of constructivism by emphasizing the importance of social interaction within the process of learning. An environment that fosters a constructivist approach to learning values the

learning process. Learning that occurs is viewed as an art of meaning making. This process occurs through learners working to construct knowledge instead of being told what they should know and why.

While constructivism establishes collaboration as essential to the process of learning, social constructivists contend that it is impossible to separate learning from social contexts (Vygotsky, 1986; Wertsch, 1997). This conception has implications for understanding how an individual learns. Sociocultural perspectives are constructivist in nature because they rely on the tenets of collaboration, but extend this conception to intertwine social interactions and context. Vygotsky believed that it was "through participation in activities that require cognitive and communicative functions" that true development occurred (pp. 6-7). Vygotsky contended that the historical, situational, and contextual components of learning were essential in understanding how an individual created knowledge. He believed that no one learning scheme existed and it was in the dynamic relation between what was already known and outside experiences that each person was able to create their own knowledge. Knowledge was not seen as something an individual could discover, knowledge, within the principles of social constructivism, was created.

Within this conception of learning and growing, individuals had to be active participants in their own knowledge construction. Vygotsky posited that Piaget's theories of *interaction* did not fully describe the process of learning; instead he contended that the process of learning relied on the *interlacement* of culture, language, intuition, and experiences of an individual (p. 123). It is how these factors are interlaced for each individual that transformation and growth occurs for each person. Learning within this perspective cannot be separated from the social, historical, and political contexts of an environment. The social, historical, and political contexts are all parts of the many facets that become interlaced to create knowledge. Within the tenets set forth by Vygotsky, it is critical to understand learning by studying the social interactions associated with the processes of learning. Each learner has a unique set of experiences that helps shape their perceptions of knowledge and truth. How each learner goes about creating this knowledge is what comprises the learning process. It is throughout this process that previous experiences interact with new experiences, learners collaborate and discuss to

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make sense of their experiences, and as each learner goes through this process their knowledge and perceived truths are transformed—learning occurs. Study group models (Joyce, et. al., 1989) and professional learning communities (DuFour & Eaker, 1998) are inquiry-based models of professional development that have attempted to provide space for teachers to collaborate and create knowledge, but in implementation have fallen short. The lack of cohesion between epistemology and learning theory will be discussed in the following sections. Ideally, models of professional development that would align with a social constructivist learning theory would construct a space were knowledge could not be separated from a learner; within this perspective the knower and the known are inextricable linked together.

Making Connections

Dissemination Model

The *dissemination model* would align with the perception of a teacher as an object, someone to train who does not need to think critically about the information she was provided. Within the dissemination model teachers would attend sessions that only allowed for one person, usually an "expert" to talk while they listened. After the teachers listened to the presentation they were then expected to implement the strategies that were just discussed without any questions.

This model perpetuated the process-product conception of teaching, which sought to provide teachers with the information to implement within their classrooms (Cochran-Smith & Lytle, 1993; Shnellert, Butler, & Higginson, 2007). Such dissemination models were viewed as highly de-contextualized in-service professional development models that were dependent on an outside "expert" to provide information, while little to no follow-ups were received after teachers listened to the presentation. Walpole and McKenna (2004) stated that the problem with these types of models of professional development were that they did not connect understanding of the school curriculum to the information they were providing to teachers so change did not occur. The inability to connect content to what the teachers needed highlights the separation that has been noticed between the knower and the known in relation to literacy professional development. Because the teachers were disconnected from the content being delivered to them they viewed such in-services as meaningless. They were not able to interact within the sessions, they were

merely told what to do, and if confusion happened when they went back to their classroom to implement the new strategy, no one was there to help them. In these models of professional development teachers were viewed as intermediaries who were there to ensure the production of satisfactory products (Greenberg, 1983). The products in this perspective were the students and the rote memorization of knowledge that the teachers passed on to them. This model of professional development relied upon the fact that there was knowledge outside the teacher and through the use of experts knowledge could be deposited into teachers. Just as the behaviorist learning theory (Skinner, 1953) positioned learners as objects; this professional development does the same. It considers all teachers to be trainable and does not acknowledge their mental activity as essential to their learning. Teachers considered this model of professional development as removed from what they really needed in their daily teaching.

Interactive Model

The *interactive model* attempted to progress from the dissemination model by encouraging teachers to think about what they were implementing and how they were implementing material. Teachers were encouraged to ask questions within the interactive model, but were still not considered in charge of their own knowledge creation. Within these professional development sessions someone usually comes to deliver information to the teacher. The teachers may ask questions to clarify what they are being asked to know, but are not actively involved in the creation of new knowledge. This model relied upon the tenets of cognitivism, which subscribed to the fact that individuals were able to be given knowledge that they could interact with in a process of converting information from stimuli into interpretations to discover what information meant. In contrast to the dissemination model teachers were encouraged to work through cognitive dissonance verbally, but the end result was not for them to come to their own way of knowing, it was for them to fully understand the knowledge being given to them.

Researchers who worked towards this model of professional development recognized that the focus of teacher development needed to become more than just lessons about knowledge and/or skills, but about the "moral, political, and emotional dimension" of teacher development (Hargraves, 1995, p. 14). They advocated for the use of context-specific situations to be used for teachers to further their understanding

about how to refine their teaching techniques. Holly and Mcloughlin (1989) stated that this transition demonstrated the progression from teachers being viewed as trainable, to teachers needing development. Although this model addresses the relevance of context, knowledge instead of being created within active conversations and collaboration, is still seemingly something that can be outside of the teacher. Although teachers could raise questions or concerns they still relied on others for answers. Within this model the teachers could collaborate, but the answers to their questions were not created by them, the answers were completed by an expert or they relied on outside information as their answer. In most cases, true knowledge creation was not accomplished; discovery of knowledge was still emphasized. The conception of how to best deliver professional development morphed again to include the most recent model of professional development that focuses on the development of the *teacher-as-researcher* (Tillema & Imants, 1995).

Teacher-as-Researcher/Inquiry-based Model

The *teacher-as-researcher* or the *inquiry model* would ideally relinquish control to the teachers so they could become the ones who were able to construct their own ways of knowing. This model of professional development would provide a space for teachers in which learning was viewed as a process, one that relied upon the situated experiences and collaboration of professionals as a means to create knowledge. Social constructivist (Vygotsky, 1978, Wertsch, 1997) principles are the underlying learning theory of this model of professional development. Such models of professional development attempted to use inquiry-based techniques within their programs so that teachers could work together and generate new ways of teaching and learning. While experts in the field may be part of a discussion, the expert would not be there to deliver information that the teacher was expected to implement without question. The information gained from such an interaction would provide the teacher with more resources from which she would decide in what way to best teach her students. Teachers in this model would ideally be able to share their experiences with each other, discuss issues, and collectively work together to construct a way of knowing that meets their needs.

Current models of professional development that attempt to utilize an inquiry-based stance on learning include apprenticeship, mentoring, and coaching models. As

each program of professional development is discussed more thoroughly, tension between the type of professional development model and the relationship between epistemology and learning theory can be noticed.

The apprenticeship model matches teachers so that a new teacher can learn from a veteran teacher, while the mentoring model was very much the same idea of someone more experienced providing support for someone with less experience. The coaching model changes this dynamic by placing an "expert" into the role of reading/literacy coach to guide the teachers through learning literacy strategies. As each of these models sought to encourage collaboration and active participation, instead each model constructed new hierarchies that allowed for a veteran teacher or literacy coach to be perceived by the teachers as someone more knowledgeable than them. Therefore, in practice these models did not cultivate an environment of collaboration and reflection, instead just changed the person who delivered knowledge to teachers and created more tension and animosity amongst the staff (Nowak, 2003). The teachers again were not involved with their own knowledge creation; they relied on their mentor or coach to help them find knowledge (Hart, 2009). While the *teacher-as-researcher* or *inquiry-based model* was a step in the right direction to attempt to reach a better state of collaboration, the continuation of a hierarchy only perpetuated the separation between content and learning. Teachers were continuing to be devalued and knowledge attainment remained outside of them as something to discover to make them more developed. Cochran-Smith and Lytle (1993) articulated that the beliefs and values teachers hold in relation to teaching and learning affected their perceptions and actions within a classroom. If teachers feel as though their professional development devalues what they know and further removes them from their own learning process, they will inevitably feel the separation between theory and practice, which negatively affects their perceptions of the quality of literacy professional development they receive. More will be discussed in upcoming sections about ideal implementation as compared to actual implementation as it relates not only to *teacher-as-researcher* but in relation to the *dissemination* and *interactive models* of professional development.

Transforming the Study of Professional Development

As described above, it is evident that learning and knowledge are inseparable. As Webster-Wright (2009) contended, discussions concerning professional development can no longer only focus on how well information is being delivered to teachers. A transformation in the way literacy researchers conceptualize professional development needs to occur. Professional development needs to be explored in relation to epistemology and learning theory to truly understand the context of learning sessions for teaching professionals. It is my assertion that disconnect between theory and practice occurs for literacy teaching, which is what causes tension and frustration for teaching professionals. Pilot study research (see Appendix A) completed for this study showed that teachers perceived their professional development to be ineffective and separate from what they really needed help within inside their classroom. One kindergarten teacher stated, "We only get reading PD and it is maybe supportive in attitude but not practicality." This specific teacher begins the discussion of the distance she feels from her professional development. She does not recognize her sessions of professional development as applicable to her literacy instruction. During another in-depth interview, one teacher described her typical professional development session:

> "A lot of times we just sit and listen and we never have time to do anything with it. Because we just sit and they'll say today at the end of PD we'll have time to test our kids but we just sit and listen to something we've already heard for three hours and then we have no time left to test our kids. We waste our time a lot if it's an in-school professional development. Now if we go to a conference then that doesn't really waste our time because you can go to the ones you know will be helpful because they are actually what we need."

According to this teacher, she describes the professional development sessions that occur in school as stoic and unproductive. She stated that she just sits and listens and is never actively involved in her own development. Her perspective on professional development encapsulates the outdated version of professional development—one where teachers are being forced to listen to content knowledge that is being provided to them without the ability to interact or actively engage with their own construction of knowledge.

Although transitions have occurred as time has progressed in relation to models of professional development it is my contention that there is misalignment in the ideal state of professional development as compared to the in-practice implementation of professional development. After reviewing the three models of professional development in relation to epistemology, and learning theory, Table 2.2 outlines the ideal coherency for models of professional development, epistemology, and learning theory alignment.

Table 2.2

"Professional Development, Epistemological, and Learning Theory Alignment"

Model of Professional Developmen	Epistemology	Learning Theory
Dissemination Model……………………............Realism/Essentialism………………Behaviorism
Interactive Model………………………Hypothetico-deductivism/Formalism………..Cognitivism
Teacher-as-Researcher/Inquiry-based………...Structuralism/Contextualism………....Social Constructivsim

If alignment could occur between model of professional development, epistemology, and learning theory a more cohesive program of profession growth would result which would help to bridge the gap between theory and practice. Reinking and Bradley (2008) convey the same message as they discuss formative experiments. They posit that the main goal of formative experiments is to "put theory to work in a way that simultaneously informs practice and refines or generates useful theory grounded in practice" (p. 43). As theory and practice align the level of rigor and validity also increases. If there were coherence between the model of professional development, epistemological underpinnings, and learning theory, the rigor of such learning sessions would be amplified. The misalignment of theory and practice is what causes disconnect for teachers. I contend that if consistency across model of professional development, epistemology, and learning theory occurs, the construction of an effect, efficient, and appealing professional development model would follow.

The following section provides an in-depth look at the ideal implementation of professional development versus the in-practice implementation of professional development. It will draw attention to the three models of professional development in relationship to the nature, location, and attainment of knowledge and how an ideal state of the, *teacher-as-researcher* or *inquiry-based model* is wanted by creators of professional development, but in-practice suffers from an extreme conflict in relationship to epistemology and learning theory.

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Epistemological and Theoretical Alignment

Table 2.3

"Ideal implementation of the epistemological positions of three models of professional development as aligned with seven epistemological issues" (Adapted from Cunningham & Fitzgerald, 1996, p. 40)

	What Counts as Knowledge?								Where is Knowledge Located?		How is Knowledge Attained?			
	Can we have knowledge of a single reality which is independent of the knower? Y N	Can we have knowledge of a single reality which is independent of the knower? Y N	Is there such a thing as truth? Y N	Is there such a thing as truth? Y N	What primary test must proposed knowledge pass in order to be true? COR COH PR	What primary test must proposed knowledge pass in order to be true? COR COH PR	Is knowledge primarily universal or particular? U PT	Is knowledge primarily universal or particular? U PT	Where is knowledge located relative to the knower? D O B I M P	Where is knowledge located relative to the knower? D O B I M P	What are the relative contributions of sense data and mental activity to knowing? SD MA	What are the relative contributions of sense data and mental activity to knowing? SD MA	To what degree is knowledge discovered versus created? DI C	To what degree is knowledge discovered versus created? DI C
	Ideal	Actual	Ideal	Actual	Ideal	Actual	Ideal	Actual	Ideal	Actual	Ideal	Actual	Ideal	Actual
Dissemination Model (Realism/Essentialism)	|	|	|	|	|	|	/	/	\	\	\	****	|	|
Interactive Model (Hypothetico-deductivism/Formalism)	|	**|**	|	|	/	****	|	|	|	\	\	\	|	|
Teacher-as-Researcher/Inquiry-based Model (Structuralism/ Contextualism)	|	****	|	|	\	****	\	\	|	**|**	\	****	\	****

Note: Y=Yes; N=No; COR=Correspondance; COH=Coherence; PR=Pragmatic; U=Universal; PT=Particular; D=Dualism; O=Outside; B=Between; I=Inside; M=Monism; P=Pluralism; SD=Sense data; MA=Mental activity; DI=Discovered; C=Crea

Table 2.3 provides an overview of what the epistemological underpinnings of each model of professional development might look like if that model were implemented in its ideal state. As well, the table considers what the epistemological underpinnings might look like in each model of professional development as it was actually implemented in practice. Each question was answered first in its ideal state and then as it occurs in-practice or its actual state. The ideal columns are white and to contrast their positions the actual state has a gray undertone. Any epistemological position that changes was clearly highlighted by a bold box so that it is easy to identify where shifts in epistemology have occurred. The following sections describe the epistemological positions as they align with each model of professional development. Each section will highlight how ideal implementation compares to actual implementation in relation to *what counts as knowledge, where knowledge is located,* and *how knowledge is attained.*

Dissemination Model

The first professional development model, *dissemination,* aligns with *Realism/Essentialism.* The main theme of *Realism/Essentialism* is that it separates the knower from the known. Within this perspective, individuals believe what they are told without asking probing questions. This is where Realism/Essentialism aligns with the dissemination model of professional development. Within the dissemination model of professional development teachers are provided knowledge and do not challenge what they are told. Cunningham and Fitzgerald (1996) equated the Realism/Essentialism perspective to an animal that does not question what their senses tell them. Within this perspective a truth exists and can be discovered outside of an individual. While both the Realism/Essentialism perspective and the dissemination model believe that the knower can be separate from the known, in practice disconnect occurs in the processes associated with how knowledge is attained. An ideal state of the Realism/Essentialism perspective would value both the senses and mental activities to discover truth; however, as this is where the dissemination model of professional development differs in practice as compared to the ideal state. The dissemination model excludes the use of mental processes such as reflectivity and relies heavily on the senses to discover truth. While both the Realism/Essentialism perspective and the dissemination model of professional development agree that there is knowledge independent of the knower and it can be

outside of the knower, the point of contention that causes tension between the ideal state and actual state of implementation is that the tools used in attaining knowledge are not agreed upon. Cunningham and Fitzgerald even discuss different views as to whether knowledge is created or discovered within the epistemological position of Realism/Essential. The disagreement within Realism/Essentialism shows through as a model of professional development uses the epistemological underpinnings of Realism/Essentialism such as the dissemination model and instead of providing space for discovery and creation, the senses and data are more accepted. Tillema and Veenman (1987) believed that a "trainer-controlled" environment is preferable as compared to a "teacher-controlled" environment because the trainer-controlled environment is easier to manage (p. 145). An ideal state of the Realism/Essentialism would recognize the need for senses and mental activity such as reflectivity in learning, but enacted within the dissemination model, mental activity such as reflectivity are not recognized because it removes the levels of control away from the "expert." A dissemination model of professional development in practice wants to ensure the complete separation between the knower and the known and therefore does not accept the teaching professional as an active agent within their own knowledge creation. The dissemination model in practice has knowledge that is expected to be presented to teachers and accepted without critical reflection. Further discussion in upcoming sections will critically analyze why many professional development models fall back on the dissemination model. One reason may be because it is the only model of professional development that does not differ in various knowledge positions between ideal and actual implementation.

Interactive Model

The second model of professional development, *interactive,* aligns with the *Hypothetico-deductivism/Formalism*. In an ideal state Hypothetico-deductivism/Formalism has roots within an early conception of pragmatism, where knowledge is used as a "tool" (Cunningham & Fitzgerald, 1996, p. 43). Knowledge within this conception involved the knower, and after series of investigations individuals were able to discover knowledge. Although this perspective valued the knower as an active participant that gathered sense data to discover truth, this perspective does not value mental activity. The separation that still exists between sense data and mental

activity accounts for the belief that knowledge can be discovered as compared to created. As this epistemological position is aligned with the interactive model of professional development there is coherence in that both perspectives believe that there is believed to be truth and that knowledge is primarily universal. Moreover, knowledge is discovered in the interplay between the knower and the known and the individuals testing of sense data to discover knowledge.

Discrepancy between the ideal positioning of the Hypothetico-deductivism/Formalism perspective as it relates to the interactive model of professional development occurs in two epistemological positions. An ideal underpinning within the Hypothetico-deductivism/Formalism position would say that the knower cannot be separate from the known; however, in practice there is considered to be a reality outside of the knower. While the interactive model does provide space for teachers to use sense data, there is a reality independent of the knower/teacher that is still expected of teachers. Although teachers may interact with strategies, within this model of professional development there are still specific outcomes that the school expects a teacher to reach. Similar to the implementation of literacy coaches within schools, teachers are introduced to an area of disconnect within their teaching, then provided with a specific strategy to use with students, and under the guidance literacy coaches are expected to show growth in their ability to implement the strategy that was provided to them. Even though the teacher had the ability to interact with knowledge/strategy, the interactive model of professional development still provided knowledge to the teacher that was decided upon outside of the knower/teacher.

The reliance on an outside reality within the in practice implementation of the interactive model of professional development also leads into the second area of disconnect. While the interactive model if aligned consistently with the Hypothetico-deductivsm/Formalism position of epistemology would contend that knowledge is true based on a pragmatic approach, in practice the interactive model aligns more strongly with the correspondence theory of truth that states "the true is what corresponds to the real" (Cunningham & Fitzgerald, 1996, p. 41). Instead of teachers working to determine what knowledge works best for their understanding, which would be the case with pragmatic theory. Correspondence is valued which forces teachers to match their

understandings (knowledge) with what had already been determined as real independent of them as the knower. Instead of interacting with knowledge, teachers in practice are still told what they should know and only interact with whatever content they are provided with throughout professional development. In an ideal setting teachers would be able to work with knowledge, to determine what is needed at the time in order to find an answer, but in actual practice teachers are expected to hold true to the knowledge they are given. They are not allowed to continually investigate hypotheses to determine what works best for them. In-practice, the interactive model relies heavily upon knowledge that is provided to teachers; teachers are not given ample opportunities to the work through various ways of knowing to decide what works best for their needs. In practice, this model still perpetuates the notion that knowledge is outside of the teacher.

Teacher-as-Researcher/Inquiry-based Model

The final model of professional development, *teacher-as-researcher* or *inquiry-based model*, parallels the *Structuralism/Contextualism* position within epistemology. The Structuralism/Contextualism position of epistemology in its ideal state aligns with the inquiry-based model of professional development because each value the knower as dependent on the known, value the tenets of pragmatism, rely on a pragmatic theory to determine truth, and advocate for the creation of knowledge instead of the discovery of knowledge. These two perspectives support the perspective of a teacher that acknowledges her as a knowledge professional capable of being responsible for her own learning.

However, as shown in Table 2.3, in practice the inquiry-based model of professional development fails to develop such a model of professional development. It can be seen in Table 2.3 that as we progress from the dissemination model, to the interactive model, and finally to the inquiry-based model misalignment becomes more apparent. While creators of professional development recognize the value of supporting teachers as integral components within their own learning processes, in implementation models of professional development fall back on the behaviorist conceptions of teachers as trainable objects unable to critically reflect upon their own teaching and learning as a means to create new ways of knowing. As discussed by Tillema and Veenman (1987) such models are more easily controllable. Tillema and Veenman contended that if

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teachers are given too much responsibility as it relates to their own professional development teachers will not be able to determine where their deficiencies are and will be ineffective at achieving effective growth. This position may account for the misalignment between the inquiry-based model of professional development and the Structuralism/Contextualism position of epistemology. While creators of professional development recognize that training is perceived in a negative light and models of professional development should value the teacher as knowledge, they attempt to create a space where teachers are responsible for their own growth. However, in practice such models epistemologically rely on underpinnings that are more aligned with the dissemination model of professional development and the Realism/Essentialism position of epistemology. Table 2.3 highlights that five of the seven questions related to epistemology are misaligned between ideal implementation and actual practice.

While the inquiry-based model of professional development touts that is collaborative, self-reflective, provide ample time for teachers to work collectively, etc…in practice this model still heavily relies on knowledge/content that is provided to the teachers by an "expert." Teachers are not encouraged to work pragmatically through issues to construct knowledge for a given context that works for them. Moreover, knowledge is still not perceived to be a process, products are still central to this model, and while mental activity is acknowledged it is still not considered to be a vital component within the process of knowing. Knowledge is still considered to be something that can be discovered. While teachers are considered to be more involved within this model of professional development, they are still not considered to be capable of creating their own knowledge. They still are perceived to need heavy guidance and instruction and are not responsible for their own growth.

Summary

The previous discussion of each model of professional development highlighted that as professional development was presented it attempted to include the teacher as a more valuable component of the professional development process, while in practice the epistemological positions that align with such models of professional development move further away from the ideal positions and align more closely with the dissemination model of professional development (see Table 2.3). This chart described the ideal state

of these three models of professional development and how each model positioned the knower in relation to the known. In practice, two of the three models do not stay consistent with their epistemological underpinnings. While the *dissemination model* stays firm in the perpetuation of one known truth that stands separate from the knower as knowledge is discovered, in practice, the *interactive model* and the *teacher-as-researcher or inquiry-based model* are more closely aligned to the tenets of the dissemination model and continue to separate the knower and the known, which will be further highlighted within the following review of research. Although they were created as an attempt to more actively engage the teacher in the creation of knowledge, most models of professional development still rely heavily on dissemination as a vital component.

The purpose of the following review of research was to highlight three of the most recent professional development models that are in practice and describe the underlying positions of epistemology and learning theory. The issue of the separation between the knower and the known will be woven throughout to establish the need for a new model of professional development that seeks to empower teachers as knowledgeable and needed within their own knowledge construction. It is within the power of professional development models to either perpetuate the "trainable" teacher mentality or transition from this negative stereotype into a perception of the role of teacher that comes closer to meeting the role of a teacher as a knowledgeable and self-reflective practitioner as discussed by James (1899) and Sockett (1985). James (1899) posited that teaching should rely upon the tact and divination of professionals. Teachers should not just be told what to do and what literacy strategies to implement; they should have time to collaboration, decide, and reflect upon best practices related to their own teaching and learning issues. If the focus and underlying foundations of epistemology were more aligned and rationalized through theory, teachers would then be able to determine what they need assistance with and be engaged in their own learning construction. The following review of research further accentuates the need for a model of professional development that thrives on active participation, collaboration, and critical reflection as essential epistemological and theoretical components within a space where education professionals' growth is cultivated.

Review of Research

In the progression of professional development models, from *dissemination*, *interactive,* and *inquiry-based*, it seems as though creators of such models recognize the value in collaboration and active teacher involvement, but are still somewhat dependent on continuing to recognize the teacher as a receiver of information as compared to a professional who can bear the responsibility of their own growth. While Cantrell and Hughes (2008) acknowledged the importance of teacher efficacy, which related to recognizing teachers' emotions, beliefs, and values as essential aspects of professional development and other researchers have distinguished reflection as integral to successful professional development (e.g., Poglinco, Bach, Hovde, Rosenblum, Saunders, & Supovitz, 2003; Slepkov, 2008) teachers are still not in charge of their own growth. While times have progressed from a de-contextualized *dissemination model*, to a more *interactive model*, and in more recent times infused the *teacher-as-researcher or inquiry-based model* into how professional development is delivered to teachers, it seems as though where knowledge resides and who legitimizes what is considered to be knowledge is still an essential question that needs further exploration. As I review some of the most current professional development programs in schools, I will discuss how the knower and the known are positioned. Specifically, the focus will be on these three professional development models: (a) *coaching, mentoring, and apprenticeships,* (b) *professional communities,* and (c) *online programs.*

Coaching, Mentoring, Apprenticeships

While the apprenticeship, mentoring, and coaching models all work to bring meaningful professional development to teachers, in a sustained an on-going manner, as stated previously, these models also introduce a new level of hierarchy into the schools. Coaching, mentoring, and apprenticeship models would align with the *interactive model* of professional development that would hope to bring professionals together to collaborate, question, and come up with a new way of knowing, but in practice this does not seem to occur. Mraz, Algozzine, and Watson (2008) relied upon a coaching program to describe how teachers, reading specialists, and principals perceived a school-based coaching model related to their growth. They conducted their study to better inform the literacy field about perceptions of coaches within school contexts as compared with

models that were not on-site, providing continuous development. Mraz, Algozzine, and Watson found that the role of a literacy coach needed to be better defined because, as implemented, titles and duties were often reported as volatile. A concrete conception of what specifically a coach should be doing within a school would help a school describe exact schedules of when and in what capacity the coach would work with various education professionals within a school. As these models of professional development work to create an on-going, sustainable environment for professional growth, it is evident that there is tension between coaches and teachers. Teachers notice that reading/literacy coaches are placed in an "expert" position and their knowledge is then less desired or useful. Inside of working together to grow the interactions within these professional sessions are topical and not concentrated on what the teachers need (Nowak, 2003).

Literacy coaching may have varying degrees by which teachers and professionals understand its involvement in a school's literacy environment. While the International Reading Association and the National Council of Teacher English have issued position statements, researchers such as Sturtevant and colleagues (2006) agreed that coaches needed to be a part of a sustained program organizing professional development in a climate that they are included in, and could assist with as a leader, knowledgeable in the area of literacy. It has become more understood that in practice literacy coaches' positions and roles may shift based on the needs, context, or situations, in which the school and its literacy program may find themselves (Rainville, 2007). To better understand the changing role of the literacy coach, the following work has tried to uncover some of the underlying characteristics, perception, and discourses a literacy coach may use to conceptualize their literacy coaching position.

As a means to describe coaching, Gibson (2006) designed a qualitative study where she observed coaching sessions, components of guided reading, and interviews with one literacy coach and one teacher. She investigated what roles were most important in constructing a collaborative, coach-teacher environment. What she discovered was that while the use of modeling was beneficial, in order to interact effectively with the teacher, the coach had to be willing to continue to learn and grow not only within her shifting position as a coach, but in increasing her knowledge as she was responsible for providing detailed feedback and suggestions to teachers. The coach

needed to take the stance of an expert while constantly reflecting on her own practices to increase her ability to produce positive results with the teacher.

As the coach assumed the role of an expert and provided constructive advice to teachers, the resulting relationship between coaches and teachers has been questioned. Teachers began to view their own position within the schools as less than that of the reading/literacy coach. Nowak (2003) described these negative perceptions between literacy coaches and teachers. After exploring the interactions between coaches and teachers in a summer professional development practicum, the conversations had little to no teacher comments or engagement. Coaches were not promoting self-reflection and the topics remained superficial. Conversations tended to revolve around individual students and their characteristics. Teachers were beginning to distance themselves from the reading/literacy coaches because they were not actively engaged with their knowledge development. The literacy coach became a new person that was in the position to tell them what they needed to know and how exactly to implement literacy strategies. Nowak's study proved that teachers did not perceive their needs as being met by the coaches, the information remained topical and was unassociated with what they really needed assistance with inside their classroom.

While the previous studies found issues with this type of professional development, Fillman (2005) and Morris (2002) both described characteristics of coach-teacher relationships that created positive partnerships. All situated in varying contexts, urban, rural, and low-performing schools, two common threads could be seen throughout these two studies. The first characteristic of positive implementation was when coaches worked with individual teachers on specific needs of the children in their class. This finding demonstrated why in Nowak's (2003) study the coach had trouble facilitating productive conversations with teachers. The teachers were only engaged as they spoke of specific needs, and were not interested in issues that did not relate to them. This is evidence as to why the knower cannot be separate from the known. The process of learning must be dynamic and interactive (Vygotsky, 1978). Furthermore, within a mentor-mentee relationship similar findings surfaced that articulated teachers' suggestions for small, focused group work, support sessions, and the inclusion of modeling as essential to the success of their mentorship program (Vaughn & Coleman,

2004). Again, active collaboration and involvement in their own learning engaged teachers within these studies. They wanted help to grow as knowledgeable education professionals without being told exactly what to know and how to use it even if it did not pertain to their level of need. Cantrell and Hughes (2008) highlighted the impact of coaching in supporting teachers' development toward mastery, which then was positively associated with feeling of increased self-efficacy. Their study focused on the development of middle school teachers and the connection with becoming more efficient in literacy strategies across other subject areas. They reported that coaching played an important role within their feeling of self-efficacy and their journey towards becoming stronger teachers at integrating literacy strategies. If a coach actively seeks to listen to teachers and not hold all of the knowledge a collaborative relationship could flourish, however very few studies reported such an environment (e.g. Gibson, 2006; Nowak, 2003; Smith, 2006)

Most studies were descriptive in nature and were essential in further describing the strengths and challenges of implementing professional development programs that used an apprenticeship, mentor, or coaching model in hopes of creating positive change within schools. Based on these findings a coach's role needs to be explicitly outlined along with the times and expectations of what duties the coach would be in charge of such as small-group professional development sessions and modeling of strategy instruction. Such models overwhelmingly work best when the coach listens to what the teacher needs and works with them. If the reading/literacy coach assumes they know what a teacher needs and does not communicate with them about what they need assistance with the teacher feels removed from the learning process. The coach is then just disseminating knowledge and not relying upon the tenets of social constructivism (Vygotsky, 1978) to work collaboratively with teachers. This separation between the coach and the teacher, the expert and the novice, or the knower and the known are all ways to establish the tension between two ways of knowing. Instead of vying for the all knowing position, future professional development models need to foster a community of knowledge where no one person or object holds the truth, but where all information can work together to establish a new way of knowing.

Professional Communities

  Overtime, it became apparent to various creators of professional development and researchers that there was a significant gap between research-based strategies and practical implementation. Seglem (2009) wrote about her epiphany moment where she attended a workshop about professional communities and she thought she was there to "just be a teacher," but instead they expected her to be an active participant by sharing ideas that worked within her classroom with other teachers. Collaboration was not only encouraged it was expected. This conception of professional communities has begun to take hold within the realm of literacy professional development. It relies upon the stance that professional development should be more inquiry-based to provide teachers with opportunities to critically examine their practices and decide where more help is needed (Donnelly, Morgan, DeFord, Files, Long, Mills, Stephens, & Styslinger, 2005). If coaching could be situated within the *interactive model,* professional communities may be one step closer to the *inquiry-based model* as described by Tillema and Imants (1995). Professional communities attempted to engage teachers so they could be reflective of their own issues related to teaching and learning.

  While previous professional development programs tended to focus on telling teachers what they should be implementing, professional communities are beginning to be used as models that focus on the learning over content. DuFour (2004) created a professional learning community program that has been adopted by various schools across the United States that attempted to change the overall climate of the school to one that recognizes the development of teachers, not merely their ability to implement certain strategies provided to them. Craig (2009) found that schools that embraced such models were attempting to bridge the gap between how the context of their schools fit with the reforms and research-based initiatives being implemented within their buildings. When conversation revolved around this type of inquiry-based development they believed that their instruction would benefit. Coskie and Place (2008) extended their conception of a professional community and explored the benefits of teachers who received National Board Certification and the impact these individuals had within their school community. While some teachers felt disconnect between the new information they were learning and their school communities that hindered their ability to implement new strategies, other

teachers reported being "brokers" of information that helped bridge the gap between outside forces such as the National Board and their school community. In reflection of this study, it was placed within the category of professional community because it was an example of how teachers were given an opportunity to become the expert and "broker" knowledge between outside forces and their internal school communities (p. 1904). When given opportunities, more research needs to be conducted to determine what experiences afford teachers similar opportunities and what fosters such empowerment amongst teachers. While the in-person community of practice is highlighted as one step closer to valuing the knowledge teachers' hold, the study conducted by Coskie and Place (2008) demonstrates that brokering is still occurring and knowledge is something that researchers much still go and obtain. Within this position, the teachers are not actively constructing knowledge within their communities of practice; they are out searching for answers.

Furthermore, while synthesizing various articles about communities of practice, many of them addressed in some capacity the issue of power or tension amongst members of a professional community (e.g., Curry, Jaxon, Russell, Callahan, & Bicais, 2006; Dooner, Mandzuk, & Clifton, 2007; Wood, 2007). While power was not an outright finding, various discussions from their findings relate to the structure of professional communities and highlight components that affect the cohesion and sustainability of such in-person professional communities. Dooner, et. al described the cognitive dissonance within professional communities and teachers' lack of knowledge about how to deal with such tensions within a group setting. This study found that while teachers recognized the importance of having varied opinions they needed to adopt strategies to cope with them. One strategy used was that of a "hot seat" that allowed one person with an opinion to be the focus while others attempted to agree and disagree and come to a conclusion (p. 572). While the use of this strategy to deal with conflict was briefly discussed, an analysis related to if this strategy effective in how teachers came to new understanding was not fully developed.

The previous study focused on teachers attempting to interact within an in-person professional community. Other research has explored how first year teachers interact with professional communities of practice. Curry et al. (2006) described how first year

teachers learn more about their overall school and its power structures by being a part of a community. This study concluded that beginning teachers learned about the culture of their school by being a part of inquiry groups that translated into their ability to work together to feel less isolated. A large part of the success of a professional community is to define who participates, all teachers or just new teachers, and then moreover, the ability to establish trust within these groups (Wood, 2007). Wood contended that the development of such trusting relationships was essential to the success and sustainability of professional communities. She believed that the frequency of how often groups met and with what degree of regularity was integral to building trust within groups. If all members of the group recognize the knowledge and experiences that every member brings to the group, the community of practice begins to work as a complete unit. They establish levels of mutual engagement, joint enterprise, and shared repertoire as their goals and attitudes begin to align and collaboratively work together to create new ways of knowing (Wenger, 1998). This model is most closely aligned with the ideal environment of *inquiry-based* professional development. Knowledge was recognized as connected to the teachers/knowers, and the only way knowledge was created was through the collaboration with other professionals seeking to grow as well.

Online Programs

There are not yet many articles that address the effect of online professional development programs related to the field of literacy research. From the few studies that were selected, support was an important component of the rationale and findings of their use (Huai, Braden, White, & Elliott, 2006; Hur & Brush, 2009; Vavasseur & MacGregor, 2008). These studies all addressed the continuous and on-going support of professional development websites and the connection to teachers' feelings of self-efficacy related to their ability to be more knowledgeable about literacy instruction. Instead of dealing with issues of in-person tension evident within the coaching models (e.g. Nowak, 2003; Mraz, Algozzine, & Watson, 2008) and in-person communities of practice (e.g., Curry, Jaxon, Russell, Callahan, & Bicais, 2006; Dooner, Mandzuk, & Clifton, 2007; Wood, 2007) many are turning to the new medium of online space to construct online communities of practice. While the research related to online professional development as it is related

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to literacy was scarce, it is important to establish the types of online systems that were created as part of these three particular professional development programs.

Within the world of technology today there are various platforms that allow for interaction and co-construction of material for the purposes of learning. Some of these might include: (a) webinars, (b) interactive polls or smart surveys, (c) forums, (d) blogs and microblogging, or (e) live chatting functions. Hur and Brush (2009) explored the postings of three self-generated online communities where K-12 teachers were members. These blogs were constructed outside of professional development models and teachers were using them outside of school. These sites were places where teachers could share lesson plans or discuss teaching issues, but were not mandated by their school systems. This study was one of the only ones that focused on a community created by teachers and for teachers. Their blog was not a place where school officials were forcing them to go to find out information; it was truly a created space for them to grow. While this study explored technologies that were interactive and participatory using Web 2.0 features, the other two studies relied on more Web 1.0 technologies for their professional development program. Thomas (2008) contended that there are still various definitions for Web 2.0 technologies, but what many definitions had in common was the way that Web 2.0 was innovative and allowed users to generate content versus Web 1.0 technologies that only allowed for the dissemination of knowledge. Hur and Brush (2009) looked at postings of websites that were conducted like blogs that allowed teachers to create the content whereas, Huai et al. (2006) and Vavassuer and MacGregor (2008) only relied up Blackboard as their technology component or video recordings that teachers could later watch. Their professional development programs were not inclusive of user-created content; they used technology to disseminate information in a new way as compared to face-to-face methods but were not inclusive of Web 2.0 capabilities. These studies were examples of the way that new technologies were being used to disseminate knowledge in an old manner. Teachers were not constructing knowledge. During these online sessions they were merely commenting on the knowledge provided to them or just consuming the knowledge without reflection or collaboration. In these instances, the professional development model worked to establish an epistemological stance where knowledge is constructed, but in practice knowledge was mostly disseminated and not questioned.

Huai et al. (2006) used their website to provide information to teachers. They found that teachers were more able to learn terminology and understand types of assessments. Their study focused on the technical components of training a teacher using a new medium, this method although using technology did not treat the teacher as a teacher-researcher. Similarly, Vavasseur and MacGregor (2008) noted the support of online interactions, but they were a mere supplement to face-to-face interactions. Knowledge was separate from the learners and was provided to them via an online platform.

While the studies conducted by Huai (2006) and Vavasseur and MacGregor (2008) focused on using new technology to accomplish an outdated model of professional development, Hur and Brush (2009) concluded that the interactive nature of the blogs and user-generated websites used within their study showed teachers sharing emotions, while also building confidence as a component to their growing sense of camaraderie on the part of most members of these online groups. They analyzed and coded postings to show evidence of these types of interactions. From this study it is clear that technology has the potential to be used as a professional development model that provides a space where teachers can actively share and engage, and guide their own learning. The study conducted by Hur and Brush also shows that teachers are searching for open platforms where they can actively participate in learning and sharing with one another. In this kind of environment teachers are valued and responsible for their own growth. They are told by outside "experts" what they should know, they are able to collaboratively work with others to create knowledge that will ask and were not told what to do. This study provides support for the involvement of teachers within their own construction of an online space, where they can decide what they need and when they need it as a model of professional development. Moreover, all the studies viewed online access as supportive and strengthened their feelings of self-efficacy.

Discussion

The previous review of some of the current professional development programs highlighted some of the changes that researchers and creators of programs have tried to make to literacy teacher development. Guskey (1995) called for an *optimal mix* of ways to deliver professional development and it seemed as though that was what many

programs were attempting to do as professional development transitioned. Various studies combined face-to-face training sessions, meetings, coaching, and mentoring as part of their programs to explore how well teachers implemented strategy instruction, (e.g., Cantrell & Hughes, 2008; Vaugh & Coleman, 2004) while other studies have included methods such as online discussions or videotapes to extend in-person development sessions (e.g., Huai, et. al., 2006; Vavasseur & MacGregor, 2008). As each program has attempted to combine different techniques of delivering information, one distinction still exists—each model is continuing to have knowledge reside outside of the teaching professionals and treat knowledge as though it is something that can be provided to teachers to correct their deficiencies. Each model has made a concerted effort to achieve a state of inquiry-based learning but only one had alignment between the underlying epistemology and theory of the social nature of learning that allowed group to be successful (Hur & Brush, 2009). While this study explored blogs and websites created by teachers, for teachers, these websites were not part of their professional development. These teachers created and joined these groups to grow as professionals on their own. Further research needs to be completed that includes the construction, usability, and efficiency of an online professional development model that cultivates a professional learning community for literacy teachers.

The focus of this study was to actively co-construct an online space *for* teachers and *with* teachers that fostered their professional growth. In turn, this formative experiment extends the conversation related to professional development to include epistemology and learning theory. Specifically, how the type of professional development model, epistemology, and learning theory should align to fundamentally change the way in which professional development is viewed. If new models of professional development could design their programs with the underlying tenets of epistemology and learning theory, solidified in relation to professional development, implementing such models would be more coherent.

While literacy professional development research acknowledges the importance of researcher-teacher partnerships (McCutchen & Berninger, 1999) and reflection (Slepkov, 2008), it is the alignment between epistemology and theory that needs to be emphasized to establish a dynamic model of professional development. The proposed

model of professional development for this dissertation would hope to expand upon the current *teacher-as-researcher* or *inquiry-based model* to reach a true *structuralist/contextualist* epistemological stance that values the dynamic process involved in creating knowledge through inquiry (Cunningham & Fitzgerald, 1996). After establishing the rationale for why epistemology and theory matter, this study describes the efficiency, effectiveness, and appeal of such a website that helped to establish a place where teacher focused on the process of learning versus the product of learning; where "knowers constructed knowledge and are constructed by knowledge" (Cunningham & Fitzgerald, p. 48). It was within this social constructive process that teachers were more able to actively engage in meaningful professional development.

The following chapter outlines the theories of Social Constructivism (Vygotsky, 1978), Democratic Education (Dewey, 1938/1997) and Metacognition (Baker & Brown, 1984) to establish the rationale as to why the social construction of knowledge, meaningful experiences, and reflection are vital components in a professional development model that allows teachers to determine *what works* for them as professionals responsible for their own learning. The goal of this study was to construct an intervention that aligned model of professional development, epistemological positions, and learning theory to the theories addressed above to cultivate a community of education professionals that actively engaged teachers in their own journey of learning through the intervention LiteracyGrow.org

Chapter Three: Methodological Considerations for Design Implementation

"The knowledge of experts is an accumulation of experience—a kind of 'residue' of their actions, thinking, and conversations—that remains a dynamic part of their ongoing experience…communities of practice do not reduce knowledge to an object…they serve as a living repository for that knowledge" (Wenger, McDermott, & Snyder, 2002, p. 9).

The purpose of Chapter Three was to describe the instructional intervention within this formative experiment. Within this chapter, I discuss the theoretical framework as it explains how learning was accomplished within the intervention of LiteracyGrows.org. This chapter sought to answer the second question within the framework for conceptualizing and conducting formative experiments presented by Reinking and Bradley (2008):

2. Does the intervention, LiteracyGrows.org align with the guiding theories presented within this study to achieve the pedagogical goal and why?

The pedagogical goal of this study was to co-construct an online professional community of practice with teachers that delivered professional development focused on literacy growth in a new and innovative manner. As various designs were considered to fully describe this interactive and dynamic setting situated within an online environment, this chapter describes why formative experiment was chosen as the design for this study and is followed by a discussion of how Social Constructivsm (Vygotsky 1978), Democratic Education (1938/1997), and Metacognition (Baker & Brown, 1984) work together to describe how learning ideal took place within this online intervention.

Formative Experiment Background

Formative experiments are somewhat of a new addition to the landscape of literacy research, although they do have some historical attachment to other approaches such as design experiments (e.g., Brown, 1992) and design-based research (van den Akker, Gravemeijer, McKenney, & Nieveen, 2006). Reinking and Bradley (2008) wrote about formative and design experiments as approaches to literacy research that they hoped would be used to help bridge the gap between theory and practice. In their book they described formative and design experiments as different from each other. Reinking and Bradley contended that if a researcher chose to use the term *design experiment* they tended to align themselves the conventional settings of a laboratory. Those who decided

upon a design experiment were stated as being more aligned with quantitative methods. Researchers who chose the term *formative* to describe their experiment were described as more qualitative. They were more interested in describing the process of the intervention and the adjustments made to the intervention and how these changes positively or negatively affected the intervention. It is within this rationale that the design chosen for this study was a formative experiment because its methods allowed the research to progress iteratively, embracing the process associated with learning.

Although formative and design experiments are new within the way that literacy researchers may approach and conduct research, formative experiment was a fitting design for the purposes of the construction and implementation of an online professional community of practice. However as it is a new research design, there are not yet concrete ways that theoretical foundations and methods align within this type of research (Reinking & Bradley, 2008). Researchers are still attempting to configure what combinations of theoretical and epistemological stances will comprise the foundation of this research design. Although the exact combinations of techniques are not solidified within the field of literacy research, it is within this openness that formative experiment finds its niche within pragmatism (James, 1899/2001).

Pragmatism

Pragmatism is a worldview that describes truths as based upon experiences. James (1899/2001) posited that knowledge never grows all over; it only grows in small patches. From this stance, past perceptions are added to new perceptions and it is within this state that assimilation occurs and a new way of knowing results. True learning occurs as individuals achieve a state of equilibrium to meet the needs for a given time and space. Given this understanding knowledge cannot be considered separate from the knower. Knowledge must not be delivered to learners; learners must experience situations that cultivate their past and present experiences.

Within this perspective, experiences are part of an on-going process that does not provide concrete solutions but a method for continued work, recognizing various perspectives that may change reality (James, 1907). Formative experiment relies upon such tenets, which makes this design iterative and conducive to creating knowledge *with* teaching professionals. Formative experiment allows for an intervention to be modified

in response to what teachers' determine would work best for them as they grow as a professional. Teachers describe what enhances or inhibits their use of an intervention and modifications are made accordingly to make the intervention more conducive to the teachers' needs (Reinking & Bradley, 2008). Research that utilizes a pragmatist perspective is more concerned with what works versus what methods are employed to gain such results (Creswell & Plano, 2007; Reinking & Bradley, 2008). This particular conception of how someone learns recognizes the relationship between the knower and the known required for knowledge creation (Cunningham & Fitzgerald, 1996), while also recognizing the need for inquiry-based experiences on the part of the participant. This enables the teacher to be an active and engaged within her own learning process. Formative experiment allows teachers to determine what they need in order to learn, and appreciates that knowledge is never certain; it is a tool that teachers can use to continuously examine their own experiences on their path of professional growth. It is within these experiences that formative experiment becomes the most well suited design to facilitate these particular ways of knowing and learning.

Significance of Formative Experiment

The significance of this design was that it extended the conversation revolving around literacy professional development from focusing on content to the process of learning (Webster-Wright, 2009). By utilizing the iterative design of formative experiment this study sought to provide insight into further understanding the theoretical balance between teaching and learning that makes literacy teacher profession development more effective and enriching. As many teachers today feel alienated and/or disconnected from the resources that research can offer within their learning, formative experiment can offer an answer to the great divide that exists between research and practice (Reinking & Bradley, 2008). As teachers co-construct an online professional community of practice, their knowledge, experiences, and expertise will interact so the focus can reside in what teachers determine works for them within their learning process instead of what information is disseminated to them as previous models of professional development perpetuated. This model valued the teacher as knowledgeable instead of trainable. Duffy, Webb, and Davis (2009) stated that as standardized testing requirements rise in the United States policymakers are looking to make all teaching

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focused on skill and drill, minimizing the professionalism even further for teaching professionals. Teachers are now expected to implement heavily scripted programs instead of teaching based on students needs. Pearson (2007) contended that the current state of teaching could be considered the "McDonaldization" of teaching—where teachers are viewed as reproducible as hamburgers. This study begins the conversation related to the cultural shift that needs to occur in order for an online platform such as LiteracyGrows.org to thrive, where education professionals can engage in lifelong learning as compared to constant training.

Background Related to Online Communities of Practice

While formative experiment seemed to best encapsulate what this particular study hoped to accomplish, which was the description of an online platform for the development of an online professional community of practice focused on literacy teachers, it was important to understand what others within the field of literacy research were saying in regards to technology as it related to online communities of practice. Although literacy research related to online communities of practice is a fairly new body of research, Coiro, Knobel, Lankshear, and Leu (2009) believed that studying how communication technologies impacts literacy is a bold step in the right direction towards a better conceptualization of literacy in the 21st century. As the context surrounding teachers changes to include more technology, it is imperative that more is noticed about individuals interact and learn within online environments.

According to the PEW Internet and American Life Project, the percentage of adult Americans using online social networking websites is 35 percent, while 32 percent read blogs, and 11 percent create blogs (PEW, 2009). The outlook of how to create, cultivate, and explore communities is rapidly changing due to the integration of online technologies into the fabric of our lives. Communities of practice are no longer just taking place in-person. Thomas (2009) contended that understanding cyberspace involves understanding culture. Cyberspace is another area in life where context matters—the social, historical, and political circumstances need to be appreciated to fully comprehend the social dynamics of the interactions between people online.

Not only does socio-historical context matter in understanding communities, but further development of how online communities discuss and solve issues has also been

addressed as a concern. Bruce and Bishop (2009) discussed the need for more research, within the field of new literacies, as it is related to the community inquiry perspective; specifically, the interconnectedness of learning and literacy as lived experiences, community participation, and the use of technology to assist in construction of meaning through inquiry (p. 702). In their review of literature, Bruce and Bishop used vignettes to create a better understanding of how learning and literacy occur within social contexts online, emphasizing the importance of constructing communities that develop active participation from individuals with various backgrounds.

The previous articles highlight the importance of context and meaningful experiences as important components to consider when dealing with online environments. While context and experiences were emphasized as essential when thinking about online environments, I needed to learn more about how previous online communities of practice were created and studied. Such research brought attention to many online communities of practice that were constructed without participants and relied upon asynchronous communication (e.g., Gilbert & Dabbagh, 2005, Hewitt, 2003, Subrahmanyam, Reich, Waechter, & Espinoza, 2008). In many instances, participants were students and the online community was provided as a part of a course that mandated their participation (e.g. Fisher, Thompson, & Silverberg, 2004/2005; Gilbert & Dabbagh, 2005; Wassell & Crouch, 2008; Yang, 2008). As these online communities of practice were analyzed, focus varied based on the study as to whether a researcher looked at the way a group interacted or whether those involved learned more than those within a control group. Very few studies explored the construction, collaboration, and reflection of participants as components of analysis when studying an online community of practice.

Reinking and Bradley (2008) posited that within these new online environments it is essential to have a design that fosters collaboration between members and reflection not only on discussions and best practices but reflection upon what works best for users of online platforms that they believe help them grow. Exploring online environments is not as simple as qualitative or quantitative. Formative experiment allows for collaboration, reflection, and transformation based on the needs of those who are invested within the construction of their professional community of practice. As such, it is well

suited for the present study in that it is compatible not only with the goals of the study, but also the underlying epistemological tenets. Brown (1992) warns of the tension that may arise between designing an engaging website and research standards. Whereas, this concern is valid and might be a harder relationship between teachers, students, and researchers, I believe that formative experiment provides an interactive and iterative design that aligns with the philosophical and theoretical foundations of this study. Within this study, my role is not to decide content or deliver an agenda to teachers; I am there to foster their growth and to document what is considered to be effective, efficient, and appealing to them so that future work into online professional development may have more of a foundation towards engaging teachers as professionals.

Webster-Wright (2009) believed that professional development (PD) needed to be changed to Continued Professional Learning (CPL) where authentic context and holistic analysis of the "situated, social, and constructed" nature of continued professional learning can take place, treating professionals as "engaged, agentic individuals, capable of self-directed learning" (p. 724). The type of professional environment she discussed throughout her review of research would provide teachers with a space where they were knowledgeable, autonomous, and self-reflective. By using formative experiment, it is my assertion that together with teachers, literacy researchers will be one step closer to constructing professional learning environments that foster the knowledge and expertise of teaching professionals, instead of perpetuating the ongoing "trainable" notion of teachers that has been projected for so long throughout our culture.

Other researchers have also discussed the need for a new way of conceptualizing professional development (e.g. Garet, Porter, Desimone, Birman & Yoon, 2001; Wilson & Berne, 1999). While ongoing, sustainable professional development was discussed as a foremost concern for long-term teacher growth (Dede, 2006), new professional development programs need to cultivate teachers as those who are able to construct their own new knowledge versus others providing new knowledge to them. The preceding philosophical and theoretical frameworks outline the tenets of an online space that would engage teachers as the experts, where they are able to co-construct their own professional community of practice that cultivates collaboration and reflection as activators of professional growth. Webster-Wright (2009) stated that it is vital to construct such

spaces where professionals can have learning experiences, and it is up to researchers to listen and support them within these endeavors as a way to foster their professional growth. Professional development should not be about deciding what teaching professionals should know and forcing them to learn mandated information. Professional development should actively engage professionals to collaborate with one another and other experts within the field, to be strategic in choosing what areas within their teaching may need extra attention. Furthermore, professional growth needs to foster reflective thinking about teaching and learning as a means to better not only themselves as educators, but also the foundation of the way education and the profession of teaching is viewed within the 21st century.

Theoretical Framework

The following theoretical framework outlines the tenets of an online space that engaged teachers as experts in their own growth, where they were able to co-construct their own online professional community of practice platform that cultivated collaboration and reflection while also fostering an environment that nurtured the interrelated nature of knowledge and learning. While collaboration and reflection were described as essential characteristics in effective professional development models throughout the previous review of research (e.g., Poglinco, Bach, Hovde, Rosenblum, Saunders, & Supovitz, 2003; Slepkov, 2008) holistic context was only touched upon briefly by Webster-Wright (2009) as a critical component to future work within the area of professional development. Webster-Wright posited that instead of looking at the outcome of whether or not professionals are implementing what they are being told to within professional development sessions, it is now time to start looking at knowledge as one within the situated context of the learner and the environment. Past models of professional development separate the knower from the known focusing primarily on providing content to teachers instead of building up the knowledge that teaching professionals have within themselves. The focus of this study was to co-construct an innovative platform that encourages active engagement on the part of teachers by fostering their sense of ownership and experience as interrelated to the success of their professional growth. As a means to support the choice of design and the interrelated nature of the relationship between knowledge and the knower, the following section

outlines Social Constructivism (Vygotsky, 1978), Democratic Education (1938/1997), and Megacognition (1984) and culminate with a discussion that highlights how these theories worked together to establish a model of professional development that was grounded in the theories of collaboration, educational experiences, and reflection that account for the way in which individuals learned within the online platform of LiteracyGrows.org.

Social Constructivism

Social Constructivism (Vygotsky, 1978) was used as a foundation for this particular intervention because it encapsulates how individuals will collaboratively work to create knowledge. Within this understanding of social constructivism, Vygotsky stressed that humans are different from animals. While other theorists aligned human behavior with animal behavior (Skinner, 1938), Vygotsky adamantly stressed that humans were capable of sharing various ways of understanding with one another as they internalized the world around them. Unlike animals, humans were able to development higher level functioning that allowed them to gain knowledge from the process involved in knowing. Individuals in this perspective were able to continuously transform and use knowledge as a powerful tool for understanding the world around them.

Vygotsky defined social constructivism as an active process wherein a learner constantly is involved within a process to create knowledge. Knowledge within this perspective is not discovered, social constructivism highlights the intertwined nature of social encounters, experiences, and language all working together as an individual internalizes information and constantly works to construct knowledge. Larochelle, Bednarz, and Garrison (1998) believed that from this perspective individuals were active participants in the construction of their situated state of the world. Individuals as active participants in their own construction of knowledge had the power to recognize points of disconnect and were able to work to change themselves based on their surroundings and needs. Each individual based on their context, culture, and history could transform to reach a more ideal state of being within their current context. The process of learning under these tenets is both collaborative and reflexive in nature, encompassing the internal and external experiences of an individual. It is in the interplay between their own experiences and the social world around them that they create knowledge.

Due to the social nature of learning, Vygotsky (1978) emphasized process over product. Instead of determining an end goal knowledge creation came from the interlaced nature of all experiences that a person learns from, it is in this constant process of making sense of the world around them that an individual creates knowledge. Within this conception, the intervention, LiteracyGrows.org, relied upon such a learning theory to establish how individuals learned within the online community of practice platform. Teachers were able to actively participate in their own creation of knowledge. Teachers recognized the social nature of the online platform and their own behaviors while using LiteracyGrows.org and within the interplay between the two started to development a way of knowing that relied upon the interactions of the platform. Within this online community of practice platform, individuals focused on their own creation of knowledge and also were be able to share their understandings with others. This joint venture that they participated in was fundamental to their knowledge construction. As teachers interacted within online chats, webinars, or posted artifacts on the platform they engaged in the sharing of information that helped begin the transformation into being actively involved in their own professional growth.

Collaboration not only came in the form of sharing ways of knowing, collaboration also occurred as the intervention was co-constructed and refined. Instead of teachers being outside of their own professional development, they were actively engaged in the co-construction of their own professional development platform. Reinking and Bradley (2008) believed that interventions within formative experiments should be used to positively transform a learning environment. Specifically, this study is grounded within social constructivism (Vygotsky, 1978) because as contended by Vygotsky, collaboration was essential within transformation or growth. Just as Reinking and Bradley (2008) posited that transformation could occur within formative experiment, using social constructivism as a foundation to explain how individuals learned within LiteracyGrows.org also explained how this transformation occurred. Teachers worked with me to create an environment that met their needs. Within the process of co-constructing this intervention knowledge was gained about what teachers felt best works for them on their journey of professional growth.

Democratic Education

Democratic Education was used within this study to provide the foundation as to why meaningful experiences will be a vital component to the intervention of LiteracyGrows.org. Dewey (1938/1997) stated that "true learning has longitudinal and lateral dimension…It is both historical and social" (p. 11). It is considering the full context of a situation that knowledge can be created. It is due to this fact that Dewey (1938/1997) also described his conception of learning as a participatory process, one that enabled learners to experience learning not only through hands-on activities, but also through reflection on their meaning as part of what needed to be explored. Education in this light was a part of nature, what was learned through experience inside of formal educational settings must be transferable or meaningful to how an individual grows within all aspects of their social environments. Dewey (2007) placed value in retrospective thought and how such thought was integral to making meaning within a world that is unfinished.

Dewey advocated for these experiences to be educative—meaningful learning experiences that would support the growth of understanding. He affirmed the need for valued experiences that did not provide the answer, but experiences that engaged a learner in quality experiences in which they could learn. Within this philosophy of learning, teachers would be able to engage in professional development that they felt was important. As reported by many studies (e.g., Darling-Hammond, 1997; Doubek & Cooper, 2007; Hart, 2009; NCES, 2001; Schrum, 1999; Slepkov, 2008) teachers do not feel as though professional development is connected to what they need. The goal of this intervention was to co-construct an online space *with* teachers so that could be tailored to meet their needs. There were wide arrays of online features that the teachers could actively use such as: discussions, webinars, group talks, buddy chats, articles to read, websites to use as resources, and space to provide feedback related to how to make the intervention better meet their needs. These experiences fostered the beginnings of an online community of practice focused on creating meaningful experiences with teachers. Within the interchange of these educative experiences, teachers began to create knowledge.

Dewey (1938/1997) noted that knowledge is located within the interplay of people. Learning is considered to be a natural state as individuals work together and share experiences. Knowledge is therefore never outside of a learner; it is the transaction with ideas that knowledge is created. While individuals take responsibility for their own learning they work together within their own constant process of trying to make sense of the context around them. Within this light, it is important to note that all experiences are not educative, some are "mis-educative" and it is the ability of a group to work together to agree upon the nature of an experience that will later increase their ability to create knowledge if the experience was indeed a quality experience (1938/1997). Knowledge is located then not only in experiences but within the interplay of the group working together to contextualize all aspects of experiences.

Metacognitive Theory

Metacognition was defined as a person's ability to have knowledge and control over her own thinking and learning activities (Baker & Brown, 1984). Metacognition stems from interactive theories of learning that recognize cognition and metacognition as essential components of learning. The ability to be metacognitive as a learner is the ability to not only to be purposeful about learning but to be reflective in the process as well. Individuals who are reflective of their own experiences begin to see connections across those experiences and then attain knowledge.

Flavell (1978) discussed metacognition as grouped into two categories: (a) *knowledge about cognition* and (b) *regulation of cognition*. While these particular researchers discussed metacognition as it related to the practice of reading, this study seeks to highlight the tenets of metacognition to provide the underlying foundation as to the importance of purposeful and reflective thinking within professional development and the process teachers embark upon to create their own knowledge. Teachers that are aware of cognitive strategies are more able to use these strategies to actively engage in aspects of metacognition to determine if they have reached a viable understanding.

Various research has shown that merging communities of practice with self-regulated learning environments help teachers in their process of learning (Butler, Novak, Jarvis-Selinger, and Beckingham, 2004; Zimmerman & Schunk, 2001). These studies found that merging communities of practice with self-regulated learning fostered

authentic experiences and goals and engaged teachers. Butler, Novak, Jarvis-Selinger, and Beckingham stated that while research studies such as the ones mentioned about have explored in-person communities of practice paired with self-regulated learning, but more research needed to be done concerning online learning environment that join online communities of practice and self-regulation learning.

This call for more research only reaffirmed the need for this formative experiment that sought to investigate the efficiency, effectiveness, and appeal of an online community of practice that was grounded in theory and established the value of metacognition in the interactive state of learning.

The concept of self-reflection as a means of self-regulation has been described as one of the valuable pieces to professional development by various researchers (e.g. Ball, 1996; Slepkov, 2003). Just as students are asked to reflect upon their own knowledge regarding their ability to problem solve during reading and the regulatory processes associated with cognition such as checking the outcome, monitoring, and evaluating strategies, it is important that teachers as learners engage in the same processes throughout their professional development sessions. As Webster-Wright (2009) contended, knowledge could no longer be viewed as something outside of a professional, knowledge construction was a process that valued the intrinsic knowledge of a professional. Therefore, teachers need opportunities to be self-reflective not only about their teaching but about their learning as professionals. Brookfield (2005) highlighted the need for critical reflective thinking in the process of transformative learning, without this component the process of learning is not considered to be whole. The learner is an imperative part of the puzzle to achieve new knowledge. It is the interplay between collaboration, meaningful experiences, and reflection that embody LiteracyGrows.org as a professional development platform that recognizes the teacher as essential. The following diagram (see Table 3.1) outlines how these three perspectives of learning work together to cultivate an online community of learning for teachers focused on literacy growth. The goal of the intervention, LiteracyGrows.org, was to actively engage teachers by allowing them to guide the construction, transformation, and content of an online professional platform where their needs and experiences were valued and assisted in the continued evolution of their professional growth.

Figure 3.1

"Interplay of Learning Theories that Create an Environment which Cultivates a Collaborative Online Professional Platform"
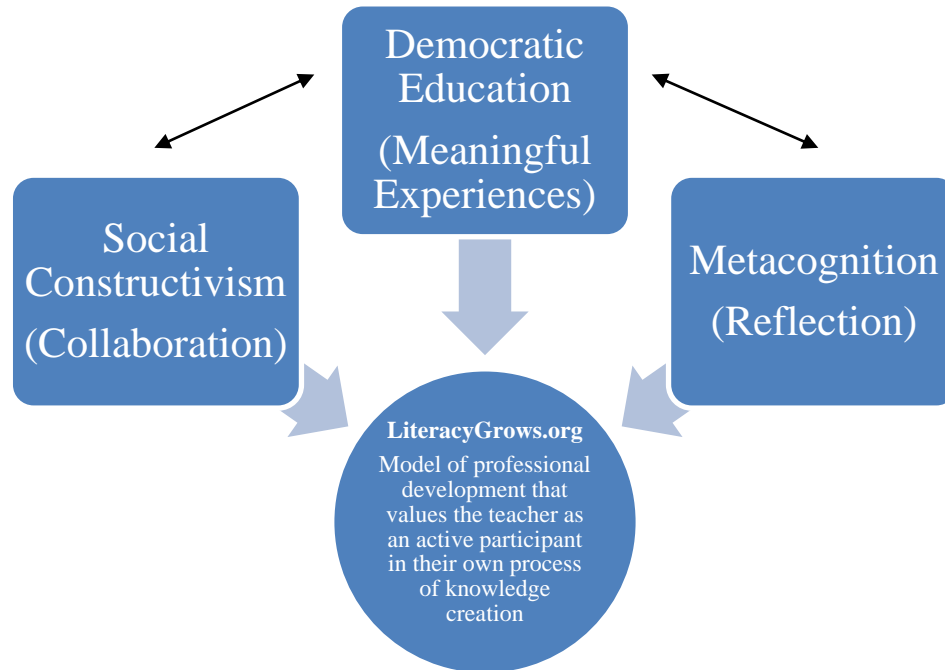
Summary

As an attempt to align epistemology, theory, and design chapters two and three provide an in-depth description of how epistemology and theory are vital components to understanding and designing models of professional development. As previous research in the area of professional development separated knowledge and the knower and was perpetuated within their design choice, this study hoped to cultivate an online space where a professional community of practice could thrive. The interrelated nature of knowledge and learner as essential was not only in the foundation of how professional development was structured but also in the way professional development was constructed for the purpose of the intervention LiteracyGrows.org. By using the previous epistemological and theoretical underpinnings as a guiding force within the design choice, I attempted to design an intervention for teachers that worked to construct a professional community of practice that was more effective, efficient, and appealing in producing meaningful professional development; a professional development model that

did not separate the knower from the known, but helped to bridge the divide between research and practice.

Chapter Four: Methodology

"An institution congenial to reflective practice would require a learning system within which individuals could surface conflicts and dilemmas and subject them to productive public inquiry, a learning system conducive to the continual criticism and restructuring of organizational principles and values" (Schön, 1983, p. 335-336).

The purpose of this study was to describe the effectiveness, efficiency, and appeal of the co-construction of an online platform that could provide the foundation for an online professional community of practice for educators. Reinking and Bradley (2008) outlined six questions as a framework that should guide the implementation, modification, and reflection of the iterative process within a formative experiment. The following questions have been adapted from Reinking and Bradley to align with this study:

1. The pedagogical goal was to cultivate an online platform for professional development and support for educators. Specifically, why and in what ways was professional development valued and important? What underlying theory was integral in constructing meaningful professional development experiences for educators?

2. Does the intervention, LiteracyGrows.org align with the guiding theories presented within this study to achieve the pedagogical goal and why?

3. What factors enhanced or inhibited the effectiveness, efficiency, and appeal of the intervention, LiteracyGrows.org in regard to achieving the set pedagogical goal of positively impacting educators' perceptions of professional support?

4. How can the intervention, LiteracyGrows.org be modified to achieve the pedagogical goal more effectively and efficiently and in a way that is appealing and engaging to all stakeholders?

5. Has the instructional environment changed as a result of the intervention, LiteracyGrows.org?

6. What unanticipated positive and negative effects does the intervention, LiteracyGrows.org, produce?

While chapters two and three focused on the first two questions of this framework, this chapter holistically describes the research design, researcher role, context, sampling

methods, phase development, intervention description and implementation, data sources, data gathering procedures, and data analysis procedures as an overall structure that facilitated the completion of each of the guiding questions as related to this formative experiment.

Research Design

As addressed within the previous chapter, the use of formative experiment is relatively new within the field of literacy research (Reinking & Bradley, 2008). Although formative experiments are new within the way that literacy researchers may approach and conduct research, it was a fitting design for this study as I worked to co-construct, implement, and reflect upon the effectiveness, efficiency, and appeal of an online platform that could provide the foundation for a professional community of practice. Reinking and Bradley discussed the ideal use of formative experiment as one that is focused on the "workability and fine-tuning of a beta version in light of systematic data collection" for the purpose of determining what works and what does not work (p. 23). The beta version of a website is one that is still in preview form. Throughout this time, feedback is collected from users regarding the beta version's usability. It is within this beta testing period that modification to a website can be made to better meet the needs of the participants. Specifically, in this formative experiment these same tenets were what underlie this study. The construction of LiteracyGrows.org as a platform for education professionals was a beta version of an online professional community of practice that offered possibilities for professional learning. By utilizing formative experiment, teachers were able to be a part of the construction of their professional learning platform. They constantly provided feedback to make it better meet their needs. Moreover, this iterative design allowed me to describe what positively or negatively affected the efficiency of the intervention, LiteracyGrows.org, while also determining what teaching professionals perceived as effective and appealing as they actively engaged with their beta version of an online community of practice. Formative experiment provided the framework that afforded me the ability to work with teachers to co-construct an online space that accommodated their knowledge and expertise as a part of their learning and growing process instead of creating a model of professional development that separated the teaching professional from the process of creating knowledge.

Role of the Researcher

I assumed the role of *purposeful agent of change* (Reinking & Bradley, 2008). This role was described as a researcher who works closely with teachers to implement interventions that work to positively affect the intervention to make it more conducive for teachers' productive use in their journey of teaching and learning. Although many of the studies related to online communities of practice do not address the role of the researcher (e.g., Gilbert & Dabbagh, 2005; Lin et al., 2008; So, 2008) I would contend that it is an essential piece of understanding how a formative experiment unfolds. While purposeful agent of change fits within the research design of formative experiment it is not a widely used term within the field of literacy research.

Creswell (2007) defined a similar role as *participant observer.* This type of participation is defined as immersion on the part of the researcher within the ongoing social interactions of the participants both in the way of active participation and observation. While I could be labeled as a *participant observer,* within the relatively new design of formative experiment, I would posit that a *purposeful agent of change* better incorporates the role in which I filled within this design. I not only participated and observed, I created and adjusted the intervention based on participant feedback as a means to increase its effective for teachers. The important part of assuming this position within the study was that I had the ability to change aspects of an intervention based on participant feedback as part of the design. I worked as an agent on behalf of the teachers to develop a functioning online platform for their budding online professional community of practice that better met their needs in hopes of empowering them as literacy education professionals. Within this perspective, I was an active agent involved within with the co-construction, implementation, and day-to-day interactions related to the intervention, LiteracyGrows.org.

Context

The study took place in ten randomly selected elementary schools within Beckley School District. This school system was selected using convenience-sampling techniques (Martella, Nelson, & Marchand-Martella, 1999). This type of sampling protocol provided the framework to choose a setting based on accessibility. This particular school system was comprised of 33 elementary schools and was situated within a midsized

southeastern city. The district services 18,176 kindergarten through fifth grade students, with 58.8 percent Caucasian, 22.9 percent African American, 9.9 percent Hispanic, 3.9 percent Asian, and 4.5 percent other.

   Schools. Ten elementary schools were randomly selected to participate in this study. Based on the recommendations of the Institutional Review Board (IRB), I initially met in-person with the various principals to ask them if they would be interested in being a part of the study. After a 15-30 minute meeting where each of the ten principals decided to participate, I then opened up dialogue with the principals as to how it would work best to inform their staff members about LiteracyGrows.org. I offered to each school principal/administrator that I would come in-person and meet with their staff if they could provide me with a day and a time. While some administrators were receptive to this meeting others looked through their schedule and decided that they did not have the time for their staff to meet with me in-person. If they decided not to have me meet with their staff they were provided the same handout that I would give to teachers in-person to distribute to their staff. Due to the Institutional Review Board (IRB) regulations for this study, it was completely up to the administrator if the teachers could be notified of the intervention, LiteracyGrows.org as a resource. Information about LiteracyGrows.org was provided to all faculty that attended in-person sessions. If they opted to only receive the handout it was included in every teacher or interventionists' mailboxes. Moreover, it was up to the administrators to decide how the participants found out about the intervention. Details as to how this impacted the study are discussed in the limitations section in chapter six. However, to clearly illustrate how each school ended up learning about LiteracyGrows.org, Table 4.1 was created that outlines the demographics for each school and describes how they learned about LiteracyGrows.org.

Table 4.1.

Ten Participating Schools' Demographic Information and How Each Staff Learned about LiteracyGrows.org Initially.

School	Total # Students	Wh.	AA.	His.	Asian	Other	LiteracyGrow.org contact
Auburn Elementary	739	77%	10%	2%	8%	4%	Whole group staff meeting
Cadmium Elementary	574	76%	10%	5%	5%	5%	Whole group staff meeting
Dogwood Elementary	588	61%	24%	7%	2%	6%	Grade level teams
Ginger Elementary	579	64%	8%	16%	9%	4%	Whole group staff meeting
Lavender Elementary	682	62%	21%	9%	3%	5%	Pamphlets in mailboxes
Magnolia Elementary	387	39%	40%	14%	8%	7%	Met leadership team in-person, 6 staff members, pamphlets in mailboxes for the rest of the staff
Royal Elementary	747	72%	2%	2%	21%	3%	Grade level teams
Saddle Elementary	656	55%	24%	9%	2%	10%	Grade level teams
Trolley Elementary	573	49%	36%	6%	1%	8%	Pamphlets in mailboxes
Washington Elementary	417	51%	31%	10%	4%	4%	Whole group staff meeting

Table 4.1 shows that there were urban and suburban schools that chose to be a part of LiteracyGrows.org. Depending on what was convenient to each school, as determined by their principals, staff members either learned about LiteracyGrows.org through whole group staff meetings, grade level teams, or pamphlets in the teacher mailboxes if meeting

in-person was not an option. Each school either met in whole group, small group, or grade level teams once. During whole group staff meetings I was allotted fifteen minutes to tell the entire staff about LiteracyGrows.org. The staff would gather in the computer lab and I would walk them through LiteracyGrows.org on the SmartBoard as they sat and listened. Some schools decided to meet by each grade level. If they chose this, I met with them during their planning period for approximately 30 minutes to introduce them to the website and help them login if necessary. This was a more intimate setting, usually within one teacher's room or common area and they could login to LiteracyGrows.org if they opted to join so I could be there to help guide this process. For the administrators who chose not to have me meet with their staff, I delivered LiteracyGrows.org pamphlets (see Appendix B) to their school to place inside teachers' mailboxes. In one occurrence, which was different than the other nine schools, I was asked to meet with the leadership team only. The leadership team was one teacher from grades K-5, the Professional Staff Assistant, and the Principal. At the leadership meeting I was given 15 minutes to share information about LiteracyGrows.org and leave pamphlets for them to distribute to the other team members. All schools were provided the same pamphlet and if teachers chose to join LiteracyGrows.org an introduction video on the home screen of the website was created for them as a reminder of what was described to them in-person (video link). As a means to connect with the staff members that did not have the opportunity to meet with me in-person this same introduction video was sent directly to their school email accounts after they were supposed to receive the LiteracyGrows.org pamphlet in their mailbox. All ten schools remained part of the study throughout the duration.

Teachers. In culmination, there were 148 professionals that joined LiteracyGrows.org from a possible population of 268 individuals (55.2% rate of participation). Based on user login profile information compiled from the 148 registered members of LiteracyGrows.org, all grade levels were represented as well as various other positions within each school. Figure 4.1 outlines current positions of each participant on LiteracyGrows.org.

Figure 4.1. Current Position of Each of the 148 Participants Who Joined LiteracyGrows.org.
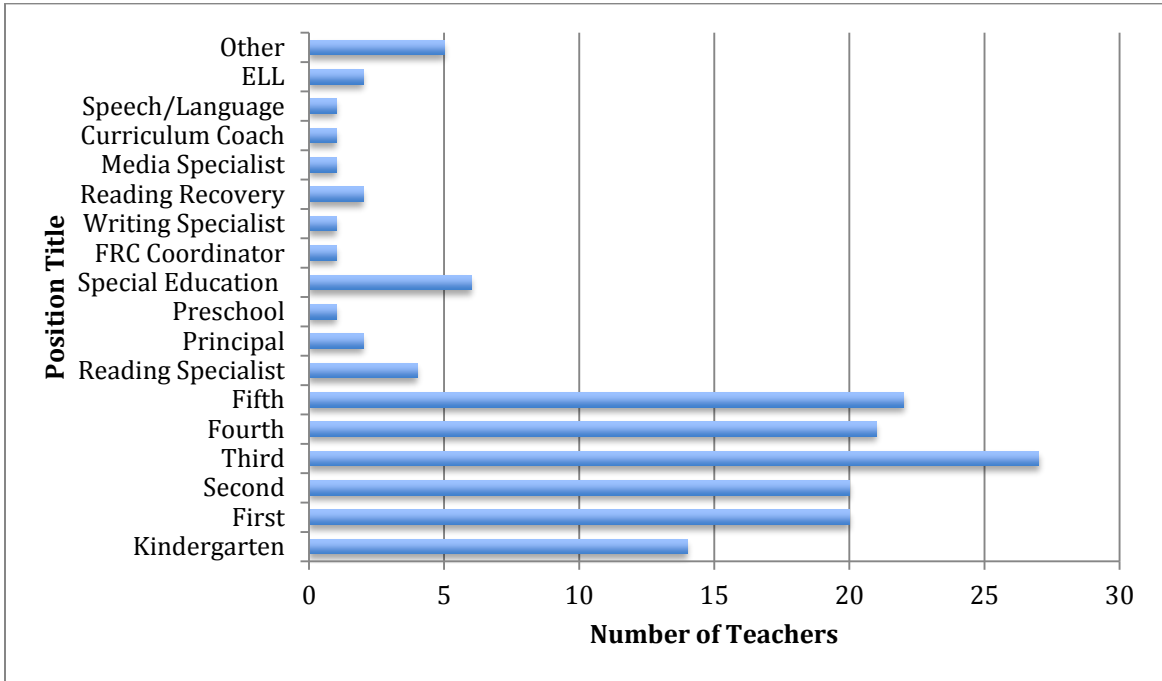
Figure 4.1 shows that all grade levels were represented. There were reading specialists, special education teachers, interventionists, writing teachers, curriculum coaches, and even two principals joined LiteracyGrows.org. While the website was meant only for teachers, these two principals were excited about the concept and were left within the population to determine if this had any effect on the way teachers/staff members interacted on LiteracyGrows.org. Later analysis will discuss the impact of diverse members. Figure 4.2 illustrates the years of experience of those 148 users that chose to join LiteracyGrows.org.

Figure 4.2. Years of Experience of Each of the 148 Participants Who Joined LiteracyGrows.org.
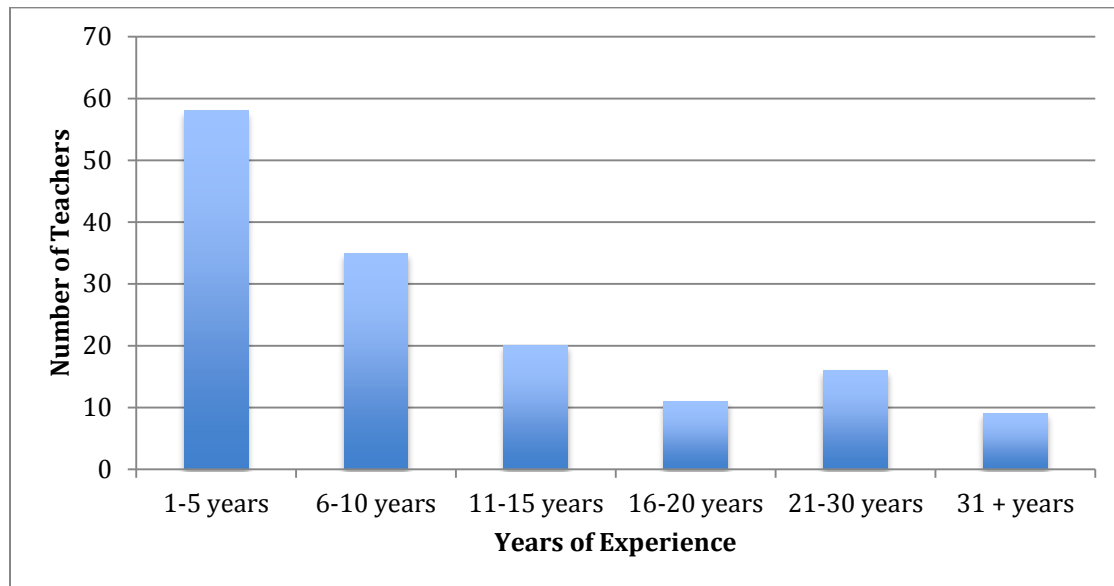
Figure 4.2 illustrates that a wide array of teachers with varying years of experience joined LiteracyGrows.org. While there were more participants who had less than 10 years of teaching experience, the most active participants had more than 21 years of experience. A specific account of high, moderate, and low users is given within chapter five and will describe this more in-depth as to how user-rate related to the findings within this study.

As stated previously, 55.2 percent of the possible population chose to join LiteracyGrows.org. Most individuals joined within the first week while membership consistently grew with two individuals joining the website the last week of data collection. As users created their accounts and joined LiteracyGrows.org they were asked to complete a user profile page that asked for the following information: (a) full name, (b) username, (c) email, (d) password, I school name, (f) grade level, (g) experience, (h) gender, and (i) topic of interest. Users could hide all profile information making it private or have it remain public to others users within LiteracyGrows.org. They also could create any username if they did not feel comfortable using their real name. While all members of LiteracyGrows.org did leave their profile information public, 81 used full names, 49 used first names only, 18 individuals created usernames from initials or nicknames, and one user was actually two teachers that chose to sign-up for LiteracyGrows.org together. As part of the creation of the user profile, users were

asked to choose the topic they were most interested in to learn more about from the following list derived from pilot data: (a) strategies instruction, (b) standards, (c) Response to Intervention, (d) assessment, I differentiated instruction, (f) fluency, (g) guided reading, (h) integrating literacy and technology, (i) reading comprehension, and (j) writing. Figure 4.3 represents how the 148 users of LiteracyGrows.org responded.

Figure 4.3. Initial Topics of Interest as Gained from User Profile Information as Each Member Joined LiteracyGrows.org.
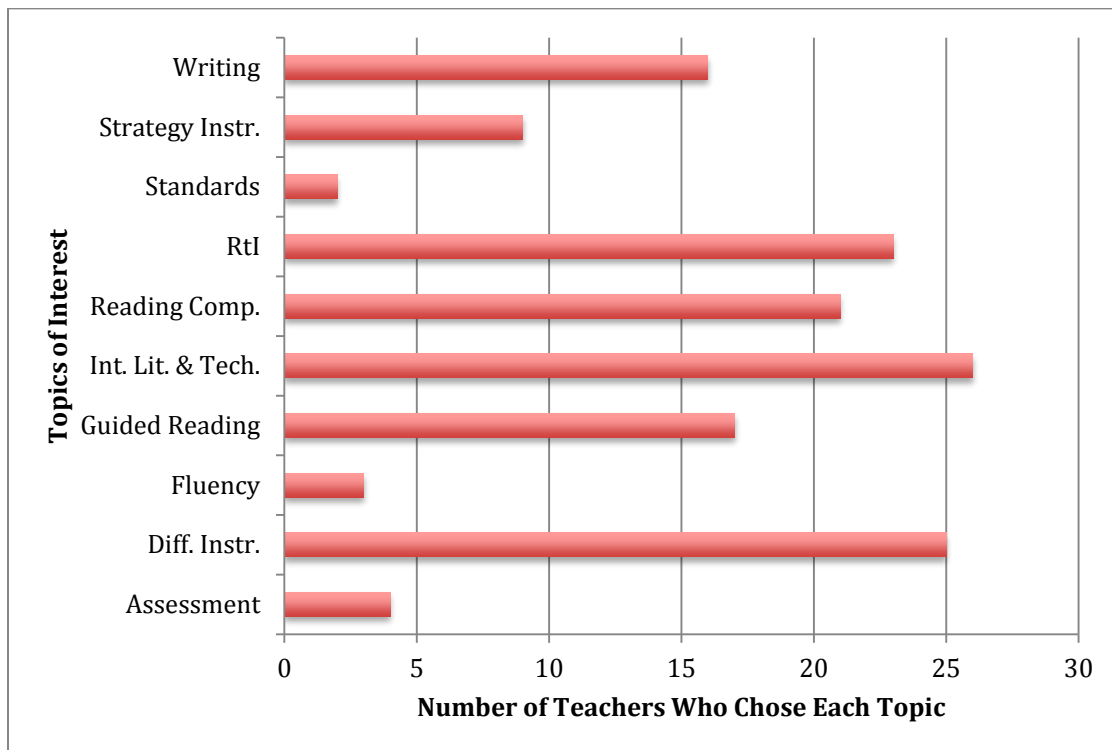
Figure 4.3 illustrates that the top three topics of interest were: (a) integrating literacy and technology, (b) differentiated instruction, and (c) Response to Intervention. While these data provided insight into what LiteracyGrows.org users were most interested to learn more about, specifically, how this information was used in conjunction with webinar voting data will be discussed later to describe how education professionals were able to have a voice in what their professional development webinar topics would cover.

Sampling Methods

While the population of 33 elementary schools was derived from a convenience sample (Martella, et. Al, 1999), sampling procedures were implemented to help randomly select the ten elementary schools that would participate in the study,

participants for initial semi-structured interviews, implementation of the intervention, LiteracyGrows.org, focus group interviews, and semi-structured exit interviews. These data were used in triangulation with one another provide a better understanding of the context in which the intervention, LiteracyGrows.org was implemented. A simple random sample was used as the sampling procedure for this formative experiment as a means to select interview participants. Kalton (1983) defined simple random sampling as the most natural of probability sampling methods. Simple random sampling was chosen as the method in which participants were chosen so that each individual school and subsequent literacy educator had the same probability of being chosen. This method of selection provided an unbiased random selection of individuals so that in the long run, the sample represented the population.

Population. The population for this formative experiment was 33 elementary schools. Each school was randomly given a number using a random number generator and selected as a possible participant in the study. If a school declined to participate their number did not go back into the sample population and had no chance of being selected a second time. The second round of selection was with the population of teachers that were randomly selected to participate in semi-formal interviews or focus groups. Again, each possible participant that comprised the population was given a number using a random number generator. As each participant was randomly selected their name did not go back into the sample population. Once they decided not to participate within interviews there was no chance they could be asked again.

Population parameters were important to the sampling methods within this formative experiment. Three population parameters were clearly defined and guided the selection process of this study. An important factor in making the decision about my population was to allow my research questions to assist in the creation of population parameters. Specifically, my research questions sought to develop a greater understanding of the perceptions of support as stated by teachers in relation to on-line professional literacy growth; therefore, I focused on three parameters to help provide boundaries for my population. These three parameters were: (a) participants, (b) grade level, and (c) location.

The first parameter was participants, who were current elementary school teachers. More specifically, I wanted to learn more about elementary school teachers' perceptions of literacy support. It was important to gain perspective from the teachers about how they felt supported, so that this could become part of the report of what works and what needed adjustment within an online professional growth platform, and the affect of certain changes on their perceptions of support. Such data helped build an understanding of these teachers' engagement levels and prior experiences with professional development in comparison with how they perceived the intervention, LiteracyGrows.org as affective for their own professional growth.

The second parameter related to the grade level that these particular teachers were associated with in their schools. For the purposes of this study I focused on kindergarten through fifth grade teachers. My area of interest lies within literacy in the elementary school. Future studies can address other grade levels, but as the researcher I wanted to begin with the foundational grades to learn more about the support these particular professionals need to be successful educators within the area of literacy development.

After deciding the parameters for participants in this study, it was also necessary to define parameters that addressed the location of the participants within this study. All participants were from the same school system in a midsized southeastern city for convenience. The elementary schools all service kindergarten through fifth grade students. These three parameters helped develop the boundaries from which I selected the participants for this formative experiment.

Sample unit. After I established my population as all kindergarten through fifth grade teachers in this one particular school system, it was worthwhile to conceptually understand the sample units for this particular study. Based on the population, my sample units were individual teachers. Alreck and Settle (2004) posited that in some instances individuals that provide repetitive responses can become redundant, which possibly means that the sample units may need to be more inclusive. While this was a worthwhile factor to consider, I maintained my sample units as individual teachers. I believed that every individual teacher may have different thoughts and perceptions about what was supportive or not supportive as it related to the intervention, LiteracyGrows.org

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and I wanted all voices to be heard. I decided that the sample units would not be as informative if they were by grade level or by school.

The other important factor in considering sample units was consistency. Alreck and Settle (2004) believed that it was vital in research to remain with the same sample unit. The respondents should not change over time, as the information would not be comparable between questionnaires if the sample units changed for each questionnaire. Therefore, I kept the same sample units to make sure the sample's responses were interpretable. I maintained the same set of teachers throughout the course of the study; of course attrition was a factor that I considered as my study progressed.

Sample frame. The sample frame for this study occurred in two parts. The first sample frame was all 33 elementary schools within this southeastern school system. From this sample frame each school was assigned a number from a random number generator. Once ten schools were selected another sample frame was completed that listed all the teachers within the elementary schools that were chosen. From this sample, I randomly selected ten percent to participate in semi-structured initial and exit interviews and focus group interviews in various phases throughout the study. Ten percent of a possible study of 268 teachers is approximately 26 teachers. Fifteen teachers participated in open-ended initial and exit interviews and nine participants were a part of the focus group interviews. While all participants were given the opportunity to complete online questionnaires and provide feedback throughout the study, only a percentage of participants were asked to participate in, in-person interviews or focus groups. If a randomly selected participant did not wish to be a part of these interviews or focus groups another participant was randomly selected using a random number generator.

<div align="center">

Phase Development

</div>

As discussed at the beginning of this chapter, there were three phases that comprised this formative experiment. Schön's (1983) *reflection-in-action* in conjuction with formative experiment provided the reasoning behind the various phases needed within this study. Instead of embarking upon a design that required a regimented linear progression of data collection followed by data analysis, formative experiment heavily relies upon the feedback of participants to actively affect the transformation of an intervention to best meet their needs. *Reflection-in-action* is how the phases are

positioned throughout the duration of the study. At no time was a phase complete, active

reflection always took place on the part of the participants and me as the researcher to

modify the intervention based on what worked for literacy teaching professionals. It is

vital to remember that this design is iterative in nature, and as phases are outlined the

transitions between them are permeable to allow for constant reflection. Figure 4.4

illustrates the three phases of the study and is followed by an in-depth description of each

of the three phases including a description of the data sources, data gathering, and

analysis that took place in each phase.

Figure 4.4. Formative Experiment Phases Map: Iterative Transformation of
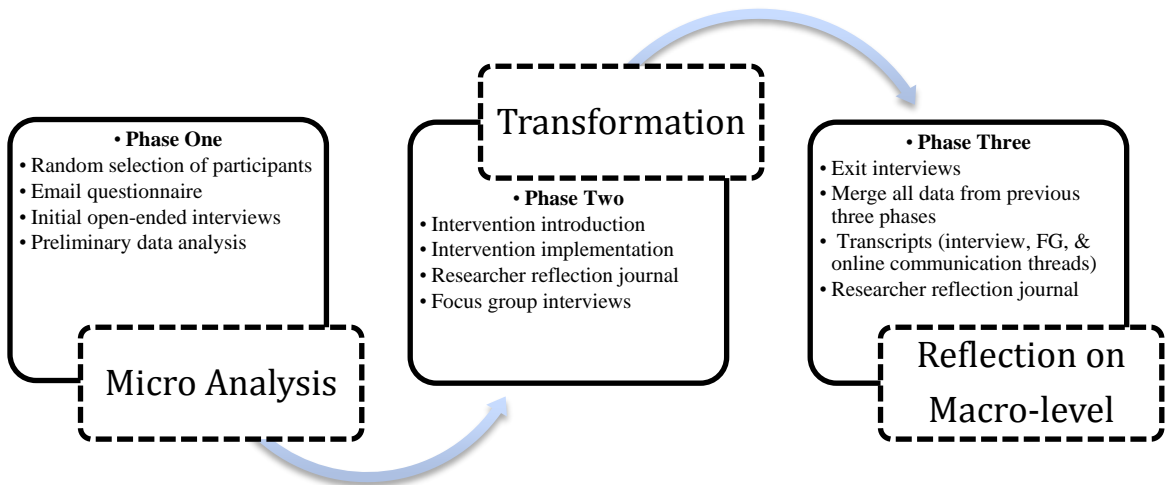
LiteracyGrows.org.

Figure 4.4 illustrates how each phase was distinct in data gathering and also highlights

how reflection was ongoing to constantly be aware of issues that were enhancing or

inhibiting the intervention, LiteracyGrows.org. This process of reflection contributed to

the transformation of the intervention, LiteracyGrows.org but also was essential to the

overarching constructs of usability and sociability that were used as themes to describe in

detail how LiteracyGrows.org was effective, efficient, and appealing as well as how it

could be improved.

Phase One

The purpose of phase one was to recruit literacy teachers to participate in the co-construction of their own online professional learning community platform. Once the teachers agreed to become stakeholders in the creation of such a platform, data were gathered to learn more about who the participants were. Data were also collected that described what the teachers' experiences had been in relation to professional development and support within their schools as it related to literacy. The data gathered throughout phase one was then used to begin the initial co-construction of an online professional community of practice where the participants helped me understand what aspects of the intervention LiteracyGrows.org met their needs or what needed to be adjusted to make the intervention more supportive. Within phase one there were two main data sources: (a) *questionnaire* and (b) *open-ended interviews*.

Data Sources, Data Gathering, and Analysis

Questionnaire. The purpose of this online questionnaire (see Appendix C) was to acquire demographic information about as many participants as possible while also learning more about the ways in which these education professionals were supported within their schools. This questionnaire was used to initially inform the construction of LiteracyGrows.org so that teachers could have a template from which to further cultivate their online community of practice.

Description. The online questionnaire created on *surveygizmo.com* was a 15 question open-ended and closed-ended questionnaire that was emailed to all 268 teachers at the ten elementary schools randomly selected to participate in the study. Email addresses were acquired from the school administrators as they agreed to participate in the study. The online questionnaire link was embedded in each email that was sent to all 268 possible participants. When they clicked on the link it took them to an online platform where they could complete the anonymous online questionnaire. The "*How are you Supported?*" online questionnaire was comprised of two constructs—demographic information and perceptions of support for professional growth. This questionnaire was piloted in spring 2009 with approximately 17 teachers, with 35 percent of the sample that responded (see Appendix C). As suggested by Alreck and Settle (2004) and as part of the piloting process, the questions that comprised this questionnaire were checked with a

small number of the participants as they completed the questionnaire. Using a think aloud protocol, the respondents were able to provide valuable information about the clarity, order, and perception of the questionnaire as a means to further develop this instrument.

Data gathering procedures. I sent the online questionnaire to all 268 participants that were teachers in the ten randomly selected elementary schools. After I sent the online questionnaire, I allowed approximately one week for the questionnaire to be completed. After one week a reminder email was sent out to all teachers to attempt to ensure a higher percentage of responses. Within two weeks there was a response rate of 13 percent. Response rate was derived from questionnaires that were completed in their entirety. More specifically, there were 33 that were opened and completed in full, 12 online questionnaires were opened and then abandoned, and eight were partially completed. Partially completed means that all questions were answered except for open-ended questions where participants had to provide their own written response.

Interviews. Within the first two weeks of the study, as the questionnaires circulated, I randomly selected 15 teachers to be interviewed. As mentioned previously, I employed a simple random selection procedure to select possible participants. The purpose of these open-ended interviews (see Appendix D) was to learn more from the teachers about how they are supported, how they would like to be more supported, and what they envision their ideal professional community of practice to include. The data from these interviews were merged with the information gained from the questionnaire to provide a preliminary understanding of what the teachers may need from an online learning community. A full description of these findings follows within part two.

Description. Interviews are used frequently with qualitative research to provide more information about a person or context. In utilizing a formative experiment as my design, I chose to align my study with more qualitative methods (Reinking & Bradley, 2008). In the review of research related to online communities of practice many studies used qualitative data such as interviews to further inform their online data collection (e.g., Ardichvili et al., 2003; Conrad, 2002; Hur & Brush, 2009; Lin et al., 2008; Luehmann, 2008; So, 2008). Instead of relying on the online questionnaire as the only data source, initial open-ended interviews were utilized to learn more about how these teachers

discussed their professional development experiences and perceptions of support as educators. I believe that the use of such data not only further developed my perspective on what was occurring within the various schools but also provided more authentic data to construct a thick and rich description of the teachers' initial perceptions of professional development and support as education professionals. The open-ended interview protocol (see Appendix C) addressed questions such as: (a) How are you currently supported as a literacy professional, (b) In what ways could you be more supported as a professional, and (c) When you think about an online community of practice what are some components that you would like to see implemented.

Data gathering procedures. As the online questionnaire was in circulation, I randomly selected 15 teachers to be interviewed. The interviews and online questionnaire were scheduled within the two-week window frame that each elementary school began participating in the study. I met each of the teachers at their respective schools for all initial semi-structured interviews. All interviews were semi-structured and asked general questions about their perceptions of support and what constructs are in place that they frequently use to grow as professionals.

In-person initial semi-structured interviews took place with the same 15 participants at the beginning and end of the study and lasted approximately 15-30 minutes per interview. Phase one interviews focused on their levels of support to provide a more descriptive account to supplement the questionnaire and what they would like to see included within the online platform. All interviews took place at the teachers' school buildings within their classrooms at a time when there were no children present. All interviews were recorded and transcribed.

Microanalysis

Inductive and deductive forms of analysis were used within an iterative process throughout this study (Creswell &Clark, 2007). I initially conducted two forms of analyses of the qualitative data: (a) coding the data broadly for events that enhanced or inhibited the intervention and modifications that were made in light of these events, looking for commonalities to create initial codes that were focused on the technical functioning of the platform and (b) coding the data for specific recurring concepts or events that were used to create categories and subcategories that provided specific

examples of what enhanced or inhibited the platform based on user feedback (Saldana, 2009). These categories were then coded as usability or sociability. Preece (2001) noted that with online environments these two constructs are essential to determine the success of an online platform. As a means to analyze or make sense of the data microanalysis was used. Microanalysis included the day-to-day operations of LiteracyGrows.org. For example, how the website functioned and technical issues that enhanced or inhibited the effectiveness, efficiency, or appeal of LiteracyGrows.org. In culmination of all data collection, reflection on a macro-level was used as part of my reflection process to make sense of how LiteracyGrows.org fit within the bigger conversation of professional development and is discussed in detail in chapter six.

Data analysis. Throughout phase one microanalysis was used as an ongoing process. Stages within microanalysis included sorting data and creating preliminary categories that grew and developed as more data were received. Preliminary categories included: kinds of collaboration, engaging experiences, or topics of concern. Wolcott (1994) discussed the first stage of data analysis of data as a "sorting procedure" (p.26). I began by collecting data from the introductory questionnaire and the initial interviews. From these data, I looked for recurring topics that could be used as categories. After initial data from questionnaires and interviews were compiled I began to categorize my findings and start building taxonomies as a way to organize preliminary data that were rearranged and reassembled as the formative experiment transformed over time. Creswell (2007) contended that at this stage in analysis it is important to begin to use theory as the foundation from which interpretations of the data can occur. Relying on this as a foundation, I began to not only code for categories, I began to understand how I was interpreting the data and what these interpretations could align with as it related to epistemology and theoretical positions that were the foundations to this study, which were discussed in chapter two.

Phase Two

Phase two of this formative experiment was the peak of *reflection-in-action* (Schön, 1983). During phase two teachers had been provided continuous access to LiteracyGrows.org. They were encouraged to provide any feedback to me as a means to modify the intervention of LiteracyGrows.org to better meet their needs. As they used it,

they reflected upon their needs as education professionals and extended comments, suggestions, and criticisms towards me so that I could better adjust their online platform to meet their needs. They reflected upon their usage of the intervention, LiteracyGrows.org and provided feedback within the online community of practice, via email directly to me, and through feedback from focus group questions. While they were engaged with the website, I also kept scrupulous notes about how they were using the intervention, when they were using the intervention, and in what ways I modified the intervention to better meet their needs. This was a constant state of reflection as I stayed on this journey with all of the participants. The process of data gathering and constant reflection provided the foundation for the ongoing transformation of LiteracyGrows.org as a co-constructed online platform that could be used by teachers as the foundation for their own community of practice for education professionals. Phase two has three data sources: (a) *intervention introduction: users who became members of the intervention, LiteracyGrows.org,* (b) *researcher reflection journal,* and (c) *focus group interviews.* Also, a part of phase two was the transformation of the intervention where user feedback, my researcher reflection journal, and focus group data were used to modify the intervention, LiteracyGrows.org to better meet the users' needs.

Intervention Description

At the beginning of phase two, LiteracyGrows.org was introduced. LiteracyGrows.org was a beta-version of an online platform that could be used as a platform to cultivate a literacy professional community of practice. Understanding that any online professional community of practice thrives when the design of the platform is user-friendly and conducive to community building, the purpose of this study was to document the immense amount of co-construction that went into the creation of LiteracyGrows.org. Preece (2001) stated that theory and better research methods were needed to support the development of online communities of practice. Such need for better alignment between theory and research was why formative experiment and conversations of alignment between model of professional development, learning theory, and epistemological underpinnings provided the foundation for the creation of LiteracyGrows.org. Formative experiment (Reinking & Bradley, 2008) valued such a design that helped bridge the gap between research and practice and also fostered an

iterative process within the study. Formative experiment provided a working framework for LiteracyGrows.org to initially be created, implemented, modified, and reflected upon to determine if the modifications based on user feedback further enhanced its development or inhibited its development. This process can be thought of as an upward spiral as compared to a linear spiral. Berg (2007) discussed qualitative research, as a spiral approach to research that embraced the ability to redefine or refine original conceptions. In this understanding, the researcher completed this process of redefining or refinement. In my interpretation, formative experiment not only allowed for redefinition or refinement of original concepts, it provided the foundation from which new information was gathered throughout the study and impacted the decisions that were made as the study progressed. The process of transformation was constant and the study continuously evolved and adapted based on the data gathered. Constant interaction between the participants and myself was imperative for positive growth to occur. Figure 4.5 illustrates the cyclical process of implementation, modification, and reflection.

Figure 4.5. Recursive Process of Implementation, Modification, and Reflection that Occurred throughout Data Collection That Helped to Inform the Development of the Intervention LiteracyGrows.org
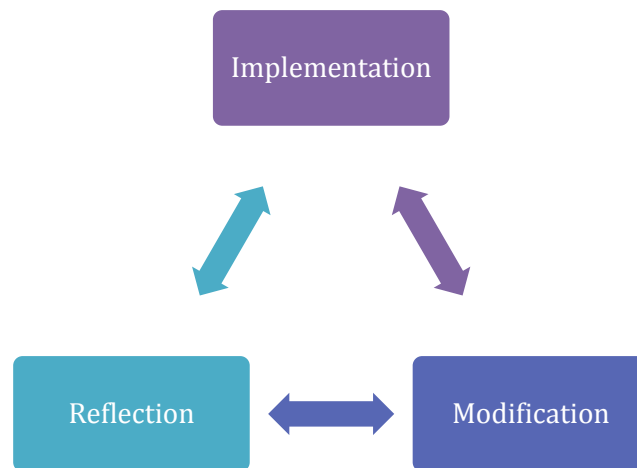
Such an understanding of this type of research design allowed for participants' feedback to be integral in the process of co-constructing the online platform of LiteracyGrows.org. This interplay between the teachers and myself as the researcher added to the understanding of the process involved in cultivating a thriving online environment for professional learning. It also provided the foundation from which such initial findings

informed the study in order to progress forward. Within this design, there is no absolute answer. It is constantly in flux, striving to move upward to reach new heights of understanding and constantly taking reflective steps to consider if changes made to the intervention were helpful and should remain, or if changes made hindered the progress and needed to be further modified. Specifically, in this study the purpose was to systematically modify the intervention to better meet the needs of participants as a means to transform the online platform to foster the creation of an online environment that could cultivate a literacy community of practice. While this study looks at six months of this process, it is considered to be a snapshot of a continuous on-going process of collaboration to constantly implement, modify, and reflect upon LiteracyGrows.org as a means to continuously co-construct an online platform that works best for knowledge creation and consumption by educators. The following section describes the initial creation of LiteracyGrows.org followed by a discussion of factors that enhanced or inhibited its effectiveness, efficiency, and appeal as reported by participants and online tracking data.

LiteracyGrows.org before modifications. As I initially developed LiteracyGrows.org, I knew that the foundation of the website needed to be conducive to participant interaction. As a means to align professional development model with underlying learning theory and epistemological foundations, it was imperative that the intervention provide a space that could handle the interactive learning process that aligned with Constructivism (Vygotsky, 1978), Teacher-as Researcher Model of professional development (Tillema &Imants, 1995), and Structuralism/Contextualism (Cunningham & Fitzgerald, 1996). This meant that users needed the space to be able to be responsible for their own learning, where they could interact, create, and consume to construct new ways of knowing.

While I understood that the platform needed to have the ability to align the model of professional development with underlying epistemology and learning theory, I first had to focus on the design. As a consumer of technology, I was drawn to clean, crisp website designs such as www.wanderinggoat.com or "Apple" type templates. Initially, I used such websites as inspiration for the foundation of LiteracyGrows.org. Using the source code associated with www.wanderinggoat.com and Adobe Dreamweaver software

I began to develop an understanding for the backend development and construction of an interactive platform. As I worked to develop a functioning website that would provide online space for communication and interaction, I came across design templates through an open source consortium, www.BuddyPress.com. BuddyPress is an extension of www.WordPress.com, which is a tool to construct websites or blogs. Initially, I worked with WordPress.com to understand design options and customizations based on coding, but soon found out that social networking templates were available to minimize the backend construction. Such templates had pre-designed features established, and through the use of widgets, plug-ins, and coding, personalized optimization for communication was capable.

Given the discovery of BuddyPress.com, true collaboration and interactivity became possible. While WordPress.com provided online space for users, it was more Web 1.0 in that collaboration and user-generated content was not the focus of such templates. WordPress.com was beneficial for constructing websites that would deliver information. With the proliferation of social networks in society, WordPress.com extended their business to establish BuddyPress.com, an online website that offered templates designed specifically for optimization of social networks. BuddyPress.com is a completely free online resource and provided the framework for online groups, forums, blogs, and personal connections. Such an interactive platform became the framework for the original LiteracyGrows.org. Figure 4.6 shows the initial template used for LiteracyGrows.org.

Figure 4.6. Original Design of LiteracyGrows.org before Any Modifications were Made Based on User Feedback

This initial template offered a space for a blog, community conversations, and user login features. LiteracyGrows.org used the same colors as presented above but through backend development I created a customized logo that replaced the header of this template. To make communication more user-friendly I also reconstructed the community tab into a 'Groups' tab, added a 'Forum' tab, and added a 'Contact' tab so that users could click on the tab and send an email directly to me with questions, concerns, or ideas. The bottom of the website remained a welcome blog, list of ten member names at a time, and a search bar to navigate the website. The URL and Domain name was purchased and housed within www.GoDaddy.com. The rights to www.LiteracyGrows.org and www.LiteracyGrows.com were both purchased for two year increments and will be renewed for an additional two years when their time expires. The backend development of LiteracyGrows.org provided an option for making LiteracyGrows.org searchable on Google and an option to keep LiteracyGrows.org

private. For the purposes of IRB and participant protection, I opted for LiteracyGrows.org to remain private and unable to be searched by Google. The original platform of LiteracyGrows.org was implemented with the ten elementary schools within the months of August 2010 and September 2010. Those who chose to become members of LiteracyGrows.org used the website for one or two months before focus group data was collected along with email correspondence of suggestions for modifications of LiteracyGrows.org. In the month of October 2010 suggestions that were made for LiteracyGrows.org were implemented and then the website continued to grow and at the end of January 2011 data collection ended. The following table outlines the phases of initial implementation, modification, and reflection of LiteracyGrows.org.

Figure 4.7. Phases of Implementation, Modification, and Reflection with the Three Phases of the Intervention LiteracyGrows.org
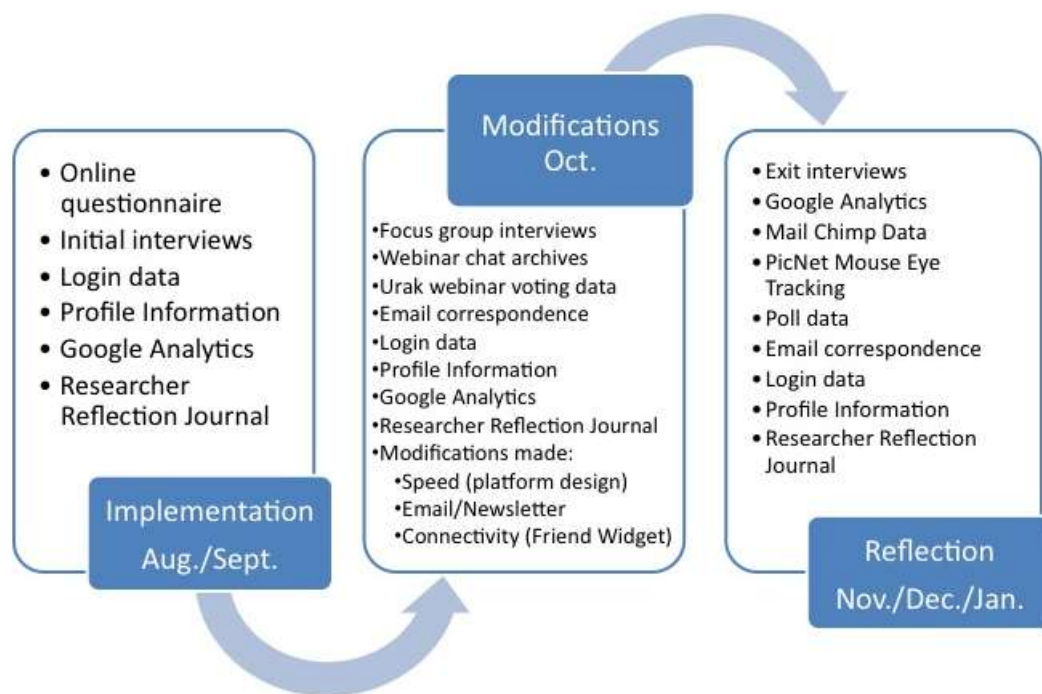
The previous Figure 4.7 helps exemplify the process of transformation that the original platform of LiteracyGrows.org underwent to progress into the version that is now active on www.LiteracyGrows.org. The next section further articulates the ongoing analyses on a micro and macro level that occurred as LiteracyGrows.org was implemented, modified, and reflected upon. This section culminates with a discussion of the evidence that

positively reflects an upward spiral towards progress of the pedagogical goal, which was to co-construct an online platform that cultivated a symbiotic relationship between model of professional development, learning theory, and epistemological underpinnings for the future potential of the creation of an online literacy professional community of practice.

Data gathering procedures. The platform, LiteracyGrows.org had 24 hour a day, seven day a week access. Data from the platform were compiled across a six-month span. Data from the platform included: (a) time spent, (b) frequency of use, (c) page visits, (d) online traffic analysis of where users were clicking, I online conversations, (f) chats during webinars, (g) voting tallies for each webinar topic, (h) user profile information, and (i) email correspondences. Specifically, these data were compiled using Google Analytics and PicNet Mouse Eye Tracking. Google Analytics is an application that was added to the backend of LiteracyGrows.org and was used to provide such rich insight into the online traffic of the platform. It allowed me to track time spent, frequency of use, and page visits by day, month, or over the entire span of the website to analyze the data on various levels. PicNet Mouse Eye Tracking was a widget added to the platform that used heat-mapping capabilities to illustrate where users were clicking. Online conversations, chats during webinars, webinar votes, user profile information, and email correspondences were all within the platform and printed out and analyzed as qualitative transcripts or interactions on the platform. Data analysis procedures for phase two are discussed after all data sources are introduced.

Researcher reflection journal. The purpose of completing a researcher reflection journal was to document my role as agent of change within this formative experiment. I was not an outsider, separate from the research. My role made me an embedded feature of how this formative experiment worked or failed to work, so it was vital that I continuously took detailed notes associated with my own biases and perceptions but also detailed notes about how the platform was functioning, reactions of participants, and any positive or negative feedback that users provided that could be used during the modification phase of the study. Some studies reviewed for this research used participant or instructor reflections to further inform their study (e.g., Hew & Cheung, 2008; Fisher et al., 2004-2005). As I assumed an agent of change position within the study, I believed it was essential to have a written record of my thoughts, reflections, and

actions in relationship to the decisions and changes that could possibly be made to the platform.

These notes were used not only to reflect upon strengths associated with my position within the study, but also to discuss and reflect upon the limitations associated with my direct and embedded involvement with all aspects of the study. Within qualitative work and especially within the symbiotic relationship of the construction of a website to be used for teachers, it is important to be forthright about my level of involvement. This discussion of my role and the possible affects because of my involvement contribute to the trustworthiness of this study.

Description. A researcher reflection journal was used to record changes made to the intervention as well as my own personal reflections about the process unfolding with the co-construction of LiteracyGrows.org. This journal was also used to make descriptive notes about what was happening within the website. Topics included: (a) how participants reacted to the introduction of the intervention, LiteracyGrows.org, (b) how users began to use the platform or what aspects were being used most frequently; (c) if there were any users that stood out based on the amount of time spent on the website; (d) suggestions made for improvements and rationales for why these issues were a concern; or I what adjustments were made to the intervention and the effects of those changes.

Data gathering procedures. I took reflective notes as I worked with LiteracyGrows.org on a daily basis and after each interview or focus group meeting. I recorded my personal reflections in my field note journal that was stored online for easy and convenient access. Notes and reflections were also recorded every few days to document what I observed and noticed about online engagement, patterns, and habits. These data were used to further develop the other data that were collected such as interview, focus group, and online data to provide a more thorough description of what occurred, changed, and happened as a result of this study. The analysis procedures section will discuss how this information was used within this formative experiment.

Focus groups. While interviews are useful to gain insight into how individual participants may think or feel, focus groups can be beneficial in gathering a group together to better gauge the consensus of the group. It is interesting to note that very few qualitative studies related to building communities of practice used focus groups (e.g.,

Goos & Bennison, 2008; Grabill, 2003). Group dynamics are vital to the success of a new community of practice. Berg (2007) discussed the use of focus groups in gathering data related to how the group interacts and discusses with one another. They may stimulate new ideas or can collectively reflect upon the usefulness of an intervention, in this case their utilization of an online professional community of practice. It is in wanting to understand more about how the participants worked together that focus groups were essential to the narrative of how LiteracyGrows.org transformed.

  Description. Throughout the intervention implementation, focus groups were used to better understand how the intervention could be changed to more positively meet the needs of the teachers. The focus groups consisted of a total of nine participants, grouped in sets of three. The focus groups relied upon an open-ended protocol (see Appendix E) that focused on the usability of the website, their engagement with the website, and their overall recommendations about the strengths and weaknesses of the intervention, LiteracyGrows.org. Focus groups met once during the implementation phase of the study to provide feedback. All focus group interviews were recorded and transcribed.

  Data gathering procedures. Focus groups met once about halfway through the intervention, approximately after two months of using the intervention, LiteracyGrows.org. Focus group interviews were open-ended and questions related to user-experiences on LiteracyGrows.org. Each focus group lasted 10-25 minutes and were audio-recorded and transcribed. During these sessions each group was asked about their use of the website and the successes and challenges related to their ability to engage with the intervention, LiteracyGrows.org.

Microanalysis

  Data analysis. Microanalysis continued to occur within phase two. Previously constructed categories from phase one (e.g. age assumptions, communication, comfort with technology, supportive components of LiteracyGrows.org and technical issues) were either validated or disregarded based upon data from phase two. Phase two data included intervention implementation, a researcher reflection journal, and focus groups. Reinking and Bradley (2008) believed that triangulation was essential in constructing a formative experiment. They advocated for the use of multiple ways of collecting and analyzing

data so that these various sources could positively impact the overall trustworthiness and rigor of a study. Together, these various data sources, merged with data from phase one to continue to inform the transformation of LiteracyGrows.org. Table 4.2 lists all initial categories that were then coded as usability or sociability to fully articulate the technical functioning of LiteracyGrows.org.

Table 4.2

Initial Categories that were Coded for Usability or Sociability to Describe

LiteracyGrows.org within Micro-findings

Category	Usability	Sociability
Age assumptions	✓	
Comfort with technology	✓	
Communication: Colleague interaction		✓
Discussion: Subconscious		✓
Experience	✓	✓
Grade level	✓	✓
How to increase communication		✓
Increase usage	✓	
Lack of teacher initiative	✓	✓
Least supportive	✓	
Most appealing aspect	✓	
Need for more communication	✓	✓
Negative aspects	✓	
Online PD	✓	✓
PD experiences	✓	✓
Potential of LiteracyGrows.org	✓	✓
Most supportive	✓	
Teacher initiative	✓	
Technical issues	✓	
Webinar information use	✓	✓
Expectations of LiteracyGrows.org	✓	

Table 4.2 shows how initial categories were sorted and further described the constructs of usability and sociability. Specifically, in relation to what enhanced or inhibited the platform of LiteracyGrows.org, which is described in detail in chapter five.

The following section discusses the intervention transformation in light of the information gathered throughout phase one and phase two, followed by a description of phase three and the culminating process of macro-analysis as a means of reflection for all the data compiled from this formative experiment.

Intervention transformation. From the data gathered from phase one and two, along with continuous data from the website using Google Analytics and PicNet Mouse Eye Tracking, I modified the intervention based upon the suggestions throughout the first three months that the platform was in use. At the point of transformation, I modified the platform based on what users stated were inhibitors of their success on the platform. There were no suggestions for improvement that were not modified an attempt to meet their needs. Such modifications included: (a) speed of platform, (b) prompting for online activity, and (c) ability to build connections. Changing the template of the platform, creating a reminder newsletter, and adding a widget were all modifications that were made that allowed members to connected more easily. Reinking and Bradley (2008) posited that such reflective practices; on the part of education professionals provided necessary opportunities for professional growth and enhancement. The relationship between the researcher and the educators becomes more symbiotic as they all work for a common goal of constructing a space that empowers education professionals. As changes were made to the website it continued to function. At no point was the website shut down to make suggested amendments. Specific details of what was modified and how this inhibited or enhanced the intervention, LiteracyGrows.org are discussed in-depth within the findings in chapter five.

Phase Three

The purpose of phase three was to gather concluding data related to how teachers felt after experiencing the intervention, LiteracyGrows.org. Phase three occurred at the end of the six-month implementation of LiteracyGrows.org. Phase three consisted of exit interviews with the same individuals as randomly selected for initial interviews. Data analysis for phase three will be discussed as I describe how all the data from the three

phases worked together to provide a narrative about the implementation, modification, and reflection of the intervention, LiteracyGrows.org.

Exit Interviews. The purpose of exit interviews (see Appendix F) was to determine if changes occurred in the way that teachers discussed their perceptions of support related to their ability to grow as professionals from the beginning of the study until the end of the study. The data gathered from these exit interviews were used with preliminary data related to levels of support to determine if there was change over time as perceived by these participants.

Description. Exit interviews were conducted with 14 randomly selected teachers. For consistency these 14 participants were the same as the initial 15 participants used within phase one of this study. Attrition was an issue as one teacher was not able to participant in exit interviews due to maternity leave, therefore only 14 exit interviews were completed instead of the original 15. The purpose of these exit interviews was to determine how teachers felt about the effectiveness, efficiency, and appeal of the intervention, LiteracyGrows.org throughout the study. Having an understanding of what the intervention, LiteracyGrows.org was initially and how it transformed overtime was an essential aspect of exit interviews, which is why the initial interview participants remained the same for exit interviews. The exit interviews were recorded and transcribed and was also semi-structured in nature. Questions such as the following were used: (a) Tell me about your experience using LiteracyGrows.org, (b) What were some of the successes and challenges related to LiteracyGrows.org, and (c) Was there anything further that could have been done to enhance your growth as a literacy professional? The focus of these interviews was to ask the teachers to reflect upon their experiences with the website from beginning to end and the transformation that might have occurred within their knowledge about literacy teaching and learning. Furthermore, the interview attempted to discover how the teachers felt about the idea of a platform to cultivate an online professional community of practice as a professional resource. The data gathered from these interviews were used in triangulation with the other data sources to compare and contrast how people participated in and described their experience with the intervention, LiteracyGrows.org.

Data gathering procedures. After the intervention of LiteracyGrows.org had been implemented for six months I contacted the original 15 participants via email to establish a time that the exit interview could occur. All exit interviews were completed by January 27, 2011. The interviews were conducted in-person and took place within each teacher's school. Exit interviews lasted between 15 and 30 minutes and all discussions were audio recorded and transcribed.

Culminating Data Analysis

At the end of data collection, I compiled all of the information gathered from the duration of this formative experiment and merged it together to determine what positives and negatives resulted with the co-construction and implementation of the intervention, LiteracyGrows.org. Moreover, to describe how intervention adjustments based on teacher collaboration assisted in making the website more engaging and interactive for teachers. In culmination, these datasets were used to illustrate what positive and/or negative transformations occurred in the way teachers perceive professional experiences that occurred within the platform LiteracyGrows.org. While phase one described the participants more fully and provided details into their perceptions of current support as education professionals, phase two used this information to develop a new means by which teachers could reach out for support while also being exposed to webinars for specific topics for professional growth, and phase three provided information as to how this professional development tool compared to the education professionals' previous experiences with professional development. As a means to analyze the data, a constant comparison approach (Glaser, 1978; Merriam, 2001) was employed. All of the data sources in addition to online transcripts of any discussion posted online were used within this microanalysis to describe participants' perceptions of the intervention, LiteracyGrows.org as a professional development resource.

Constant comparison. Glaser (1978) outlined six components of constant comparison: (a) *collect data,* (b) *look for issues, recurrent events, or activities in the data that become categories for focus,* (c) *collect data that provide many incidents of the categories of focus with an eye to seeing the diversity of the dimension under the categories,* (d) *write about the categories that you are exploring, attempting to describe and account for all the incidents you have in your data while continually searching for*

new incidents, I *work with the data and emerging model to discover basic social processes and relationships,* and (f) *engage in sampling, coding and writing as the analysis focuses on the core categories.* This framework allowed me to use the constant comparison approach throughout microanalysis within this formative experiment. As I began working with my data, I noticed that categories were forming and could be condense into the two constructs of usability and sociability. These two constructs were then used to fully describe the effectiveness, efficiency, and appeal of LiteracyGrows.org.

  Macro reflection. As outlined in Figure 4.1, after all data were compiled and analyzed using constant comparison, at the end of the study there was also in-depth reflection on a macro-level that was used to review all data from the first three phases of the study. Reinking and Bradley (2008) discussed reflection as an integral aspect to formative experiment. Reflection was used at the end of phase three as a tool to better understand how LiteracyGrows.org was situated within the larger landscape of professional development and also how the intervention could be further transformed before the next re-design begins. I found that the focus of microanalysis was related to the technical aspects of the intervention, LiteracyGrows.org while the reflection process discussed in chapter six was making sense of the intervention as it related to the larger issue of meaningful professional development. Microanalysis and macro-reflection within this study provide insight into how the intervention, LiteracyGrows.org helped create an online space that worked to better align underlying epistemology and learning theory to how education professionals interacted with professional learning experiences. Each of the three phases of data collected relied upon various data sources. Table 4.3 condenses the information to clearly show each phase, data source, and the participants who were associated with each source.

Table 4.3

Description of Each Data Source and Associated Participants in Relation to Each Phase of the Study

Phase One		Phase Two		Phase Three	
Data Source	Participants	Data Source	Participants	Data Source	Participants
Online Questionnaire	33 online questionnaires completed in total	Intervention Introduction	148 participants joined LiteracyGrows.org	Exit Semi-Structured Interviews	14 of 15 completed, due to attrition
Initial Semi-Structured Interviews	15 teachers	Focus Group Interviews	Nine teachers, three groups of three		
		Researcher Reflection Journal	Personal reflections		

Table 4.3 illustrates that from the sample of 268 participants each data source was pulled from a different person or group. With the online questionnaire, initial semi-structured interviews and exit interviews with individual teachers, and focus group data, all of these sources were used to further understand the effectiveness, efficiency, and appeal as well as positive and negative effects of the intervention, LiteracyGrows.org. Such a varied collection of data sources provided me the ability to establish validity. All data sources were also used during reflection to better understand the how the resource of LiteracyGrows.org fit within the larger landscape of professional development.

Establishing Validity

Creswell (2007) stated validation strategies included triangulating data from several sources, participating in participant review, and the importance of other researchers' review of procedures within the study (p. 44-45). My study provides strong evidence that I met these criteria. I triangulated data from a wide array of data sources

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discussed above, had various forms of communication with participants and depended on user-feedback for this formative experiment, and relied on the expertise of my advisor to help solidify my procedures and reflect upon new perspectives to better explain my findings.

Summary

This chapter described the research design, my role as the researcher, context, sampling methods, phase development, data sources, data gathering, data analysis, and how all the procedures within this study along with researcher/participant relationship and advisor consultation provided the necessary validity to ensure that the findings were an accurate portrayal as perceived by all individuals involved. Through a process of microanalysis and macro-reflection, these procedures were utilized to discover the effectiveness, efficiency, and appeal of the intervention, LiteracyGrows.org as an online support resource for education professionals. Furthermore, how the intervention of LiteracyGrows.org positively or negatively affected the professional environment for the users of LiteracyGrows.org and their perceptions of how they could be supported as educators.

Chapter Five: Findings

"The ways in which any given institution will find its situation transformed will vary, but the various local changes are manifestations of a single deep source: newly capable groups are assembling, and they are working without the managerial imperative and outside the previous structures that bounded their effectiveness. These changes will transform the world everywhere groups of people come together to accomplish something" (Shirky, 2008, p. 24).

Overview

The purpose of this study was to describe how the intervention LiteracyGrows.org was created and implemented within ten elementary schools. This formative experiment utilized an iterative process as a means to identify issues, possible solutions, and continuously document the process as it unfolded. In conclusion, this study sought to better understand what teachers considered effective professional development and what were the successes and challenges related to an online, interactive platform co-constructed with teachers to foster a literacy professional community of practice. To understand what happened as the intervention was implemented, it was important to explore what aspects advanced or inhibited the intervention. In this chapter I address the following questions from Reinking and Bradley's (2008) framework:

1. What factors enhance or inhibit the effectiveness, efficiency, and appeal of the intervention LiteracyGrows.org in regard to achieving the set pedagogical goal? (i.e., Implementation)

2. How can the intervention be modified to achieve the pedagogical goal more effectively and efficiently and in a way that is appealing and engaging to all stakeholders? (i.e., Modification)

3. To what extent did the intervention advance the pedagogical goal? (i.e., Reflection)

I begin this chapter with a description of the intervention LiteracyGrows.org after it was implemented. Specifically, a thorough report of pageviews and time spent on the platform followed by a depiction of typical high, moderate, and low user profiles on LiteracyGrows.org. After the in-depth description of the intervention, LiteracyGrows.org I discuss the implementation of the intervention, LiteracyGrows.org, and factors that

enhanced or inhibited the intervention and any modifications that were made to the intervention. Enhancing and inhibiting factors were coded on a micro level and described in terms of usability and sociability. Preece (2001) stated that online platforms constantly evolve and transform. Given the constant state of change to online spaces, it is vitally important to determine their success in terms of three key factors: "usability, sociability, and their affect on the interactions of community members" (p. 2). Therefore, data were categorized and coded in terms of usability and sociability and member interaction. Usability and sociability were used to describe the technical functioning of the intervention LiteracyGrows.org while the interactions of the members were used for further reflection in chapter six as it related to participants and the impact of the intervention, LiteracyGrows.org in relation to professional development. Microanalysis included anything related to the technical functioning of LiteracyGrows.org; specifically, things that changed on the website to make it more efficient, effective, or appealing to the participants. Macro reflections were broader and were used to better understand the intervention in relation to the larger context of professional development. Following the discussion of usability and sociability as it related to the effectiveness, efficiency, and appeal of the intervention LiteracyGrows.org, I presented evidence of progress towards the pedagogical goal and perceptions of LiteracyGrows.org as a professional development tool. In conclusion, I discussed why these findings are important in terms of the intervention LiteracyGrows.org being a platform from which the conversation of professional development could change from content delivery to learning.

Online environment

In the six months that LiteracyGrows.org was implemented there were 846 unique visits to the website, 5, 862 page views, 3, 482 unique page views, and the average time on the website was 6:52 minutes. Approximately 25 percent of users logged in before seven o'clock in the morning, 46 percent were between eight o'clock am and noon, while 29 percent of users logged in after one o'clock and before ten o'clock in the evening. Screen tracking data showed that 35 percent of users clicked on the Home tab, 35 percent clicked on the literacy blog widget, 16 percent on the Activity tab, 7.1 percent on the Members tab, 3.1 on the Groups tab, .7 on the Forums tab, .9 on the Calendar tab, 3.9 on the Classroom tab, and .2 percent on the About tab. This data provided insight into

where users were going once they logged into the website and what proved interesting to them. The features of the website included the following tabs at the top of the platform for navigation: (a) Home, (b) Activity, (c) Members, (d) Groups, (e) Forums, (f) Calendar, (g) Classroom, (h) About, and (i) Contact (Figure 5.3). Each tab provided redirections to different functions of the platform. The tabs were used to increase the efficiency of the platform.

The Home tab was where I would post reminders about upcoming events such as webinars. It was a bulletin board of updates for all users. The Activity tab was the users' message board. This was where users could write and forth and share information. Users would post links to useful websites so others could access them or have conversations on various levels of professional rigor. The Members tab was a list of all users who joined LiteracyGrows.org. They could view all avatars and ask other members to become friends with them on the platform. The Groups tab was a function of the platform that provided online space for users to create various groups of interest. There were groups created by grade level, by school, and even by topics such as first year teachers. Within these groups users could find others who were interested in the same topic as themselves and share specific information or ask targeted questions. The Forums tab was part of the discussion feature of the platform. It was associated with the groups tab and was online space for conversations based on specific topics, not open-ended questions or updates. The Calendar tab was a link to the school systems' calendar. It provided updates to school breaks and district activities. The calendar was also used to post upcoming webinar dates. The Classroom tab was where all live or archived webinars were housed. Users would click on this tab to access a live webinar or retrieve archives of past webinars and any additional materials the presenters posted such as Power Point slides. All webinar topics were gathered from user conversations online and then the top four topics were provided once a month for users to vote on for professional development. The webinar topic that received the most votes would be the topic of the month and I would find a presenter to address the topic that users wanted to learn more about. Presenters varied from a professor at a local university, to a school reading specialist, and also a representative from the State Department of Education who shared information about an initiative beginning supported by the State Department. The About tab about

my background and vision for LiteracyGrows.org, and the Contact tab was used so users could easily contact me with questions, concerns, or feedback about the platform.

Additional features on the platform included links to literacy blogs that were recommended by users. As users provided feedback about LiteracyGrows.org they wanted it to incorporate more of the websites they visited on a frequent basis. They began sharing blogs that they liked to follow such as: The School Box and the Education Helper. As they provided names of various blogs they liked to follow I would post them on the website so they could access them from the platform they were helping to create. The blogs were all recommended by teachers and all blogs recommended were added to the platform.

Overall, the four most visited spots on the platform were: (a) Home tab, (b) Literacy Blog links, (c) Activity tab, and (d) Classroom tab. These tabs were where the most interaction between users occurred. This showed that users were anxious to learn from other professionals, connect with other literacy teachers, and interact during live and archived webinars to continue their journey of knowledge creation and consumption. Knowing that educators frequented these aspects of LiteracyGrows.org in such high volume provided evidence that they were interested in building an online space to collaborate and reflect upon their own teaching and learning practices. These data coincided with what participants were stating as the pages that they felt were most useful. While this data provided insight into the traffic on the website, Table 5.1 will give a glimpse into the demographics of high, moderate, and low frequency users of LiteracyGrows.org

User profile. Login data and profile information from each user who created an account were compiled and then compared to present an overall picture of who the participants were that used LiteracyGrows.org on a high, moderate, and low level. Login data showed who logged in and at what time. Profile information provided user demographics such as grade level and years of experience. Tracking these data sources allowed me to know who logged in, how long they stayed, and what pages they visited while on the website. All users were placed together and tracked for usage. Data was reviewed and users were situated within one of three types of users. There were clearly defined break points to establish high frequency users, moderate users, and low frequency

users. Table 5.1 illustrates an overall picture of high frequency, moderate frequency, and low frequency user. High users were those who logged in 12 or more times and participated in live or archived webinars, moderate users were those who logged in seven to 11 times and occasionally participated in live or archived webinars, and low frequency users were those who logged in less than seven times and rarely or never attended a live or archived webinar.

Table 5.1.

A Profile Snapshot of the Typical High, Moderate, or Low Frequency User on LiteracyGrows.org

High Frequency	Moderate Frequency	Low Frequency
Female	Female	Female
Royal Elementary	Auburn Elementary	Dogwood Elementary
20 + years of experience	10-20 years of experience	10 or less years of experience
Live Webinar attendant	Archived Webinar attendant	Live Webinar attendant

This user profile information presents a snapshot of the high, moderate, and low frequency users of LiteracyGrows.org. Based on these data, it was surmised that the average user was female. While there were eight males who joined LiteracyGrows.org, the other 140 participants were female. Based on the data, Royal Elementary had the most teachers sign up for LiteracyGrows.org with 30 registered members but also had the highest rate of users who were actively participating on LiteracyGrows.org. Whether they posted comments, suggested websites or attended webinars, Royal Elementary staff members were engaged with LiteracyGrows.org. This school was one of the two schools that met with me in grade level teams as compared to whole group or no meeting at all. In their grade level teams the teachers could ask more questions and received more one-on-one assistance as compared to those schools that did not have small group introductions to LiteracyGrows.org. In addition to gender and school affiliation, the high user tended to be a literacy professional that had 20 years or more of literacy experience. The participants who logged in and posted questions or helpful hints were veteran teachers. On average these users logged in more than 12 times to LiteracyGrows.org over the six-month implementation. These users were also more likely to attend webinars

when they occurred live as compared to watching them once they were archived. They actively participated in these webinars and even provided email feedback after webinars to ask follow-up questions or update me with their status of trying to implement what they were learning from the webinars.

Moderate frequency users also tended to be female. They were typically from a school such as Auburn Elementary that learned about LiteracyGrows.org in a whole group setting. While they were interested in LiteracyGrows.org they were typically the users who would login and would only occasionally post information, ask questions, or share ideas. On average these users tended to login to LiteracyGrows.org every three weeks, which meant that over the six months of implementation they logged in approximately seven to 11 times. While they only occasionally posted information this was typically the user who would come to the website to watch the archived webinars. These users did not typically attend live webinars but were seeking the information at a later time that was more conducive to their schedule. These users had an average of 10-20 years of teaching experience and were past the novice stage of teaching and approaching the veteran stage of teaching.

The low frequency users tended to also be female and typically came from Dogwood Elementary School. They were notified of LiteracyGrows.org in small grade level groups and while their school had 24 users create accounts on LiteracyGrows.org the education professionals from this school and users like these individuals could be described as "lurkers." Lurkers, for the purpose of this study, were individuals who created accounts for LiteracyGrows.org and logged in but did not post information, ask questions, or share ideas. They logged in approximately three to six times throughout the six months of implementation. They usually attended one live webinar and typically did not ask questions within webinars. This group was comprised of users who had less than ten years of teaching experience and would fall into the category of novice teachers. These teachers were the closest demographic within this study to being "digital natives" (Prensky, 2001; Palfrey & Gasser, 2008). Digital natives are those individuals that were born into our society and do not remember a time that email, Internet, and technology was not an integral component within their daily lives. This group of teachers would be approximately 22 to 32 years old and while they reported in interviews and online

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questionnaire data that they utilize technology such as email, Facebook, and websites, they were not inclined to actively engage in LiteracyGrows.org. These groups of individuals were those who made comments like, "it makes me feel vulnerable" or "I mean, like who is on here?" This group of novice teachers was hyper-concerned with who were members of LiteracyGrows.org. Such comments illustrate their uneasiness with asking questions that might expose their vulnerability. Such an overall subconscious feeling of themselves as educators might impact their ability to comfortably use LiteracyGrows.org. If they struggle with communicating their needs and are concerned with who knows they are not "masters" at something such issues might underlie their "lurker" status or low frequency user status.

After understanding the traffic patterns of LiteracyGrows.org and an overarching sketch of the typical high, moderate, and low users of the intervention, the following section will illustrate how the intervention, LiteracyGrows.org evolved based on user feedback. Users of the intervention LiteracyGrows.org provided feedback on what enhanced or inhibited their experiences on the platform. Based on user opinions I adjusted the platform to better meet their needs to co-construct a more effective, efficient, and appealing professional resource.

Factors Enhancing or Inhibiting the Intervention's Effectiveness, Efficiency, and Appeal

In this section, I present data addressing the question: As the intervention is implemented, what factors enhance or inhibit its effectiveness in achieving the pedagogical goal? Often researchers analyze data deductively, starting with data and moving to a hypothesis, or inductively, starting with the specific hypothesis and looking for patterns. I used both inductive and deductive forms of analysis (Creswell & Clark, 2007). That is, I initially conducted two forms of analyses of the qualitative data: (a) coding the data broadly for events that enhanced or inhibited the intervention and modifications that were made in light of these events, looking for commonalities and themes and (b) coding the data for specific recurring themes such as communication or belief systems I had noted during data collection. These analyses were done simultaneously, as I constantly compared similar statements to allow meaning to solidify. I looked at the overlap across the data between these two analyses to develop three broad

categories of factors that enhanced or inhibited the intervention. Iterative processes of micro and macro analyses took place as I categorized, coded, and developed micro-findings and macro-findings.

Micro-findings

Micro-findings were coded as anything related to the functioning or technicalities of LiteracyGrows.org that affected the effectiveness, efficiency, or appeal as reported by users. LiteracyGrows.org was implemented for one or two months dependent on the school's implementation date before focus group interview data were collected. Focus group interview groups were selected using a stratified random sample of users that were at the time of selection high users, average users, and low users. These data sources presented an overall picture of what users felt were features that enhanced the intervention, LiteracyGrows.org or factors that inhibited the successful implementation of the intervention, LiteracyGrows.org. As discussed below, usability and sociability are broken apart in relation to what enhanced or inhibited LiteracyGrows.org. The following figure depicts the cycle of initial implementation, transformation based on user feedback, and review of changes made that each adjustment underwent within the co-construction of LiteracyGrows.org.

Figure 5.1. Recursive Process of Implementation, Modification, and Reflection that Occurred throughout Data Collection That Helped to Inform the Development of the Intervention LiteracyGrows.org
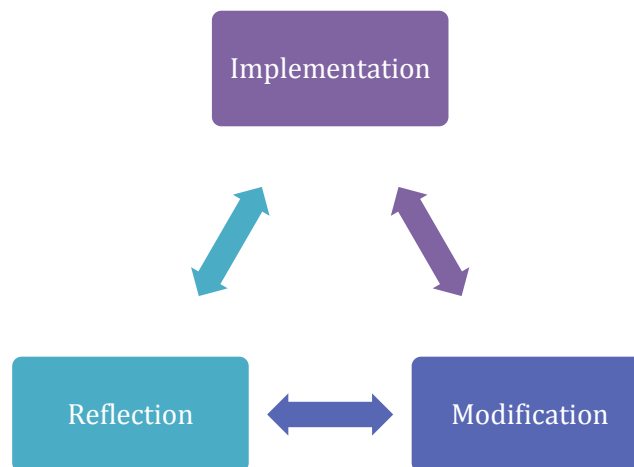
 While Figure 5.1 shows a continuous cycle, for the purposes of this dissertation only one cycle of implementation, transformation, and review was documented, but as

LiteracyGrows.org continues to grow and thrive these same micro-cycles will continued to be explored in relation to what users need and if these needs change over time. The following sections outline usability and sociability in regards to how it enhanced or inhibited the intervention LiteracyGrows.org. Usability and sociability are inextricably linked to the successful functioning of an online platform. Phang, Kankanhalli, and Sabherwal (2009) further validate the need for more research in understanding the importance of the interplay between usability and sociability, recognizing that if usability and sociability issues are not addressed and modified to meet user needs the ability for an online community of practice to flourish is suppressed.

Usability. Usability, as it relates to online platforms or software is considered to be the ability of an environment or service to be consistent, controllable, and predictable while making it pleasant and effective for users to interact with as they navigate (Preece, 2001). Usability can range from the colors of the website or online tool to how easy the platform is to navigate. There is no definitive answer as to what formula or combination of online services are necessary for every online community of practice to grow, which is why it is imperative that formative experiments are utilized to better understand a living entity such as a platform for an online community of practice that is continuously changing. Such a design allowed for LiteracyGrows.org to be implemented, modified, and reviewed. While this transformative process progressed it was for the purpose of co-constructing a professional development platform that cultivated an online space for collaboration, knowledge construction, and reflection amongst educators. The following section describes what users' perceived that enhanced the usability of LiteracyGrows.org and what inhibited their use of LiteracyGrows.org.

Ease of navigation enhanced user experience. As I sorted through the data, it was evident that there were aspects of the intervention that enhanced the overall experience of the users. Overwhelmingly, with almost 100 percent of initial interview participants, focus group participants, and email correspondence initiated by users of LiteracyGrows.org in agreement, LiteracyGrows.org was considered to be easy to navigate. One second-grade teacher stated, "some sites I go to give me a lot of trouble, they make it so hard to find anything. Every time I've logged in [to LiteracyGrows.og] it has been easy." Such ease of navigation was voiced as very appealing to users of

LiteracyGrows.org. When asked about their experience on LiteracyGrows.org users were in complete accord that the best thing about the platform was that it was functional and straight forward in the logistics of how to login and find where you wanted to go on the website. All nine focus group participants, who varied in rate of usage, echoed this same sentiment. A Kindergarten teacher also wrote in an email, "Thank you so much for creating such a wonderful website. I immediately found a comprehension power point that was useful and I can really see this as a website I check as a resource." This teacher was captivated by the ease of use, availability of resources, and the potential of how LiteracyGrows.org could provide support to her in the future. Ease of navigation as voiced by many others who have studied usability (Phang, et al, 2009, Preece, 2001) is essential to the immediate successful response of users to LiteracyGrows.org. If the platform would have been confusing or illogically designed, such inconsistencies would have caused frustration for the users and they would have immediately concluded that the platform was not effective, efficient, or appealing as it related to how they might be assisted as education professionals. Usability can be determined quickly by online users and directly affects the perception of effectiveness, efficiency, and appeal of an online platform (Krug, 2000; Nielsen, 1999). This initial response to the possible effectiveness, efficiency, and appeal is what makes co-constructing a platform vital because user feedback is essential in creating an online environment that inspires collective negotiation. Users were in agreement that ease of usage was the most positive aspect of the usability of the intervention LiteracyGrows.org. Given their positive feedback, no changes were made to the actual logistics of how users navigated from tab to tab and where information was located. The following section highlights the issues that inhibited the successful implementation of the intervention LiteracyGrows.org and outlines the cycle discussed previously (see Figure 5.1 that illustrates implementation, modification, and reflection. From this cycle, information gathered helped propel advancements of LiteracyGrows.org to make it more beneficial to users.

Speed inhibited user experience. As users of the intervention LiteracyGrows.org initially became acquainted with the website the most frequent feedback was the lack of speed. I received three emails and during focus group interviews five of the nine focus group members either broached the issue of speed or affirmed that LiteracyGrows.org

was working too slowly. The following dialogue illustrated how one focus group discussed speed as an issue:

Teacher One: "I think the site is really great and could be useful but it's really slow. I'm not sure if it's the school's Internet connection or me but it takes awhile to load.

Teacher Two: "No, I've even tried it at home and it takes awhile. That would be my biggest weakness too is that it just takes to long and we don't have time to wait on it to get it working."

This dialogue was just an example of what other teachers reiterated. Why does it take so long was echoed by users of the website, and as I listened and heard various high frequency, average frequency, and low frequency users discuss the same issue of the speed of LiteracyGrows.org. I recognized this as a fundamental technical component of the website that must be adjusted to make the intervention, LiteracyGrows.org, more efficient, effective, and appealing to all users.

In order to determine what was making the website slow I had to go into the backend of the website and remove features, widgets, plug-ins, and design attributes to determine what factors were contributing to the slow website. As each was removed I would reload the website to determine if it made it faster as a means of rectifying the issue. As an added diagnostic test, I also ran an assessment on LiteracyGrows.org through Google Chrome Extension called, Speed Tracer. Speed Tracer is a Google Chrome Extension, created by Google that assists in identifying and rectifying performance issues on a website or within web applications. Specifically, "It visualizes metrics that are taken from low level instrumentation points inside of the browser and analyzes them as your application runs" (Google Chrome Extension, 2011). The assessment breaks down all the components of the website and provides a better picture of what might be causing issues based on: Javascript, Layout, CSS style recalculation and selector matching, network resources loading, etc. Such a test confirmed that the template and the logo I had created were the leading two features that contributed to the slow loading of LiteracyGrows.org. On average, the template took 16 seconds to load and the logo took 27 seconds to load. In total, users were waiting approximately 43 seconds for all features of the website to appear and become fully functional.

Once the underlying issues that were contributing to the slow speed of LiteracyGrows.org were determined, I understood that the template and logo needed to be changed to rectify the issue. Based on participant feedback, I understood that they liked the usability of LiteracyGrows.org in terms of layout and navigation so as I worked to transform the website to alleviate speed issues, I needed to stay true to the layout and navigation. Also, while I worked on the backend of LiteracyGrows.org I did not want their user experience to change dramatically when the new template was revealed. If too much change in layout or navigation was noticed it could interfere with perception that LiteracyGrows.org was easy to navigate and user-friendly. I made many notes within my research journal of how tabs were labeled, what widgets were used, where widgets were placed within the website, and the overall login experience of where to create an account and what questions were asked, in what order. Such extensive notes were very useful in reconstructing the intervention of LiteracyGrows.org to continue what users liked, while also adjusting the design to maximize performance.

As I worked on the platform, it became evident that the previous template and logo could not be used. The template was out-of-date and could not handle the adjustments I had made to the backend such as groups, forums, and contact page. The template was designed for more basic blog functionality and not an interactive social network with multiple components. I soon recognized that the adjustments I was attempting were not changing the slow functionality of the website. Therefore, a new theme was chosen to replace the BuddyPress Social Theme. The new theme was entitled, BuddyPress Widget Theme. Figure 5.2 provides an illustration before any customizations to the template were made.

Figure 5.2. BuddyPress Widget Theme before Customizations that was the Template for LiteracyGrows.org at the Point of Modification
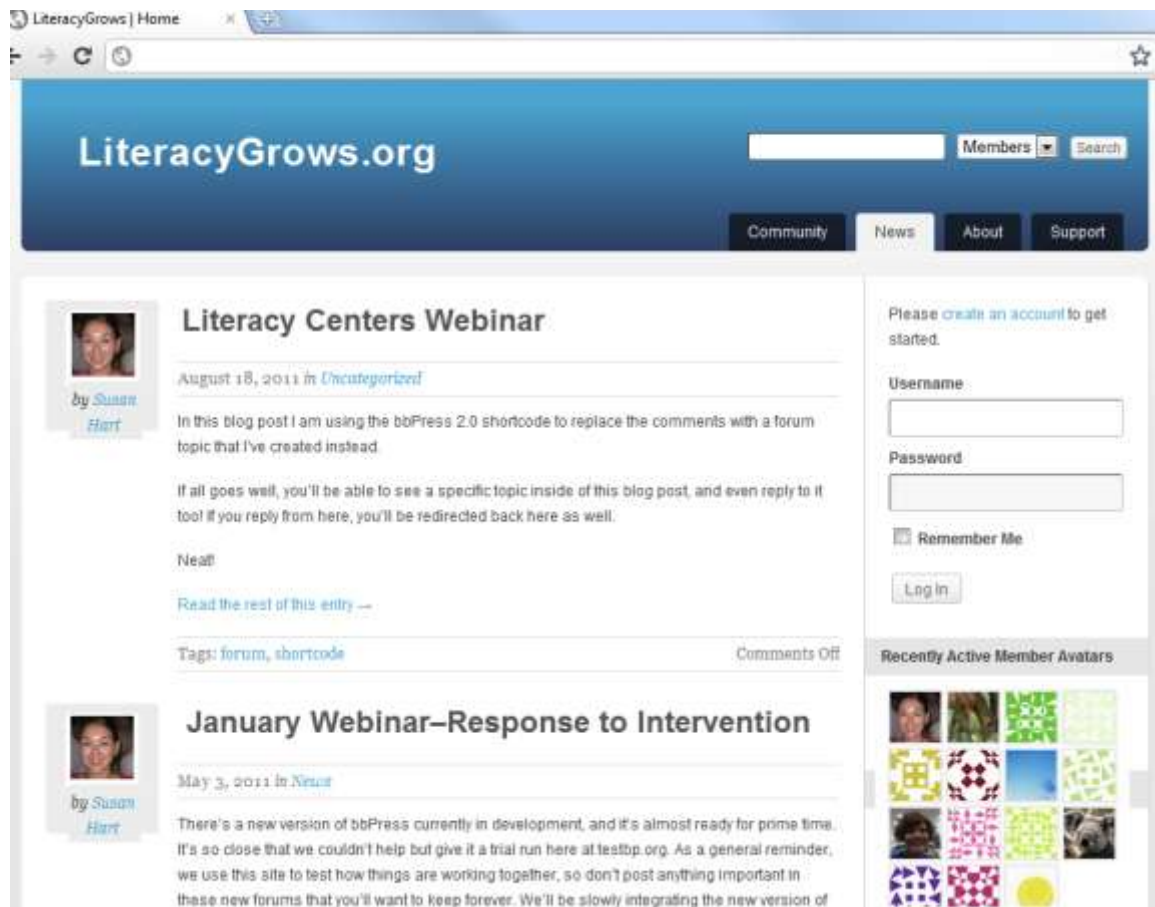
This new theme template was reviewed very well online by users and received four out of five stars from online social network creators that had already downloaded the template. BuddyPress Widget Theme could accommodate all new updates that BuddyPress.com might offer, was easily customizable on the backend, and conducive to social networking. From this template, I made sure the navigation aligned with what users were happy with from the previous design (e.g., layout, tab labels, home features), and made the switch. The only attribute that could not be transferred to the new LiteracyGrows.org template was the logo that I had created. Even within the new template design the logo took too long to load. Therefore, instead of having a logo with a picture at the top of the website, I used text only at the top and a picture as part of the front page to welcome users when they came to the updated LiteracyGrows.org. Figure 5.3 illustrates the transformed version of LiteracyGrows.org.

Figure 5.3. LiteracyGrows.org Platform after All Modifications were Completed Based on User Feedback
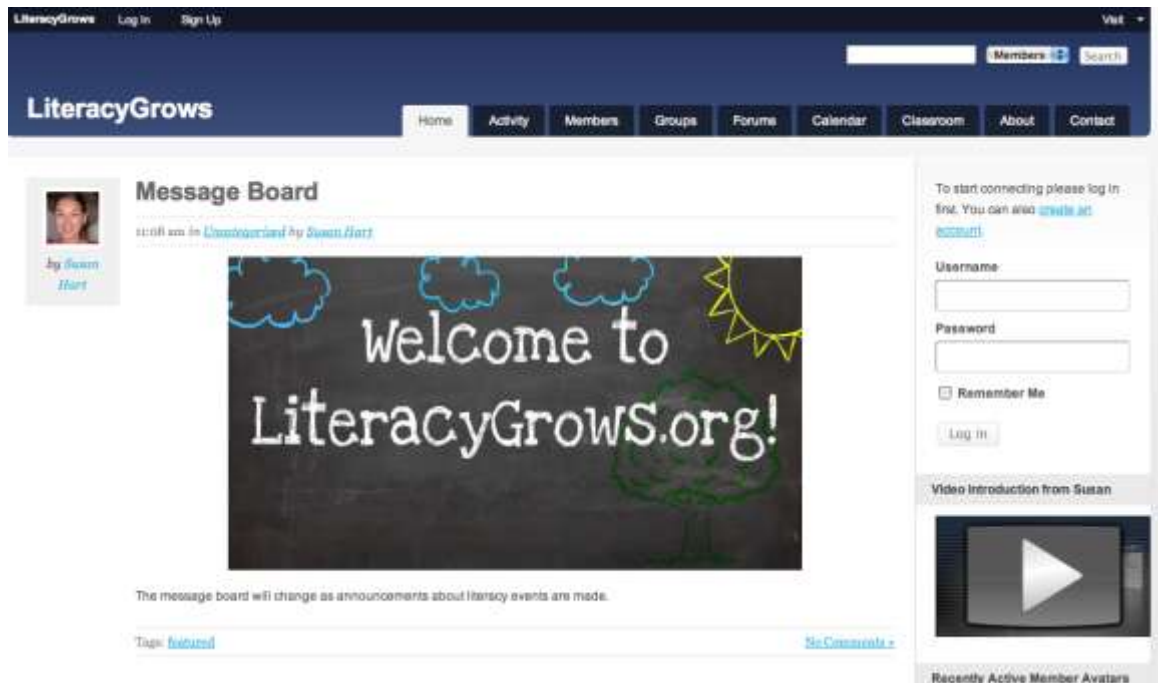
The transformation to the template, logo, and overall conception of LiteracyGrows.org did rectify the issue of speed. After all modifications were made and the previous version posted in Figure 5.3 was created, LiteracyGrows.org took an average of four seconds to load and be fully functional for users. I did not receive any emails about speed after the transformation occurred. During exit interviews three teachers did mention that they liked the new design. They had noticed LiteracyGrows.org had started to load quicker and felt it was more, user-friendly than the initial launch template of LiteracyGrows.org. A second grade teacher said, "I noticed you changed the website, I liked this one a lot. It is still easy to use and goes a lot quicker." While a few teachers noticed the change and commented on the ability of the website to be faster, others focused on the new design template as an added positive attribute of transformation. Not only did they notice that speed increased, they also noticed that while they never saw anything wrong with the prior design, in seeing the new design they recognized in what ways it was better. A third grade teacher noted,

> "I really like the chalkboard picture. I think it is really inviting for teachers. The other site was nice but after seeing this and using it for awhile I think the blue was too light on the other one and this is easier on my eyes."

Another kindergarten teacher reiterated the same attention to detail, "the first website was a little too washed out, this one was more vibrant and kept my attention." In taking the time to fix the speed and removing the problematic logo, LiteracyGrows.org became more efficient and appealing. Because of the feedback and interaction of the users and myself as the, agent-of-change, I was able to take their comments and adjust their community of practice to better meet their needs. In the process of working together, I understood what aspects of usability were enhancing and inhibiting their perceptions of effectiveness, efficiency, and appeal. While navigation never changed and remained a positive attribute to the intervention, LiteracyGrows.org, through co-construction, became a better, more optimized website that note only increased the speed of the intervention, but inadvertently adjusted the website to make it even more conducive and appealing the users.

   Sociability. Sociability in the development of online environments or software has been defined as the ability to create online contexts that support social interaction while staying aware of issues such as community and culture, ethical issues, and access (Preece, 2001). Defining the purpose of an online platform is essential to creating an online environment that cultivates appropriate levels of interaction. The purpose of the intervention, LiteracyGrows.org was to be an online, interactive platform that fostered collaboration, knowledge construction, and reflection; therefore, LiteracyGrows.org needed to have a foundation that promoted ease of interaction and online components that supported high levels on interaction for user participation. The following sections outline what elements of LiteracyGrows.org enhanced or inhibited the effectiveness, efficiency, and appeal as it relates to sociability of the intervention LiteracyGrows.org.

   Social network capabilities enhanced user experience. As I listened to users during initial and focus group interviews, many were excited to finally have a social networking tool that was just for teaching professionals. A fifth grade teacher said, "This is amazing! I think it will be great to connect with other teachers. (pause) So, we can become friends with each other?" Just as this teacher's comment purports, most teachers were excited about a social networking tool that was just for them. As this teacher asked, "So we can become friends with each other," teachers were fascinated with an online

platform that allowed them to connect with each other. Immediately, they compared it to Facebook and were very active at asking other teachers to be their friend.

Initial comments on LiteracyGrows.org were not academic in nature. As teachers were becoming acquainted with the website they engaged in friendly conversation between professionals. One teacher wrote, "It has been the longest week ever!" While between two schools another teacher wrote, "Glad you are a member! Let us know any cool things you are doing in Kindergarten." As time progressed more teachers began to connect and focus on collaboration. A fifth grade teacher wrote the following:

> "Hello, Royal Elementary 5th grade teachers! Thanks for joining the group! I hope your year is getting off to a smooth start. We are focusing on literacy this year and would love to see/hear about any great ideas (centers, small group, writer's notebook, etc.) you have to offer. Feel free to post informal ideas on the discussion board and any documents you may have to share, also. We would love to share our ideas, as well! Let us know what your needs may be."

Such comments show that teachers were energized about the intervention, LiteracyGrows.org, as a place for community growth and support. Other teachers posted websites they found useful so other professionals could click on the links to go to the websites themselves. The various kinds of comments posted present a brief picture of the social capabilities of such a platform for community of practice development. Not only were teachers informally joking with one another, they were also posting comments extending a helping hand and asking for ideas. These comments provide a glimpse into the beginnings of these teachers began utilizing their online platform to foster collaboration and construction of knowledge between teaching professionals.

While many of them spoke about already being a member of Facebook these same users were adamant that they preferred such a professional community of practice to stay separate from Facebook so they could clearly differentiate between professional and personal online space. A novice fourth grade teacher stated:

> "I really like that it is separate from Facebook, not that I have anything to hide on Facebook but I use Facebook for friends and down-time to relax. I don't want to use it to connect with parents. I like that this one can just be about work and I

could go there if I need help or want to ask a question and it doesn't go out to all of my friends that wouldn't care about teacher questions."

This same separation between professional online space and personal online space was appealing to most of the teachers I spoke with about LiteracyGrows.org. While such a platform could be integrated with Facebook instead of a standalone social networking website the response was overwhelmingly in favor of keeping the defined role of the two in place. The prospect of being offered such an interactive tool for their own growth and support excited the education professionals. Specifically, they were eager to see how such a tool could bridge the gap between elementary schools and allow them to share ideas with one another.

Webinars enhanced appeal. As teachers were asked during the initial and focus group interviews what was the most positive aspect of LiteracyGrows.org, it was undoubtedly reported that the webinars were their favorite part. Average live attendance to webinars was seven individuals with approximately five members logging in to watch archived webinars at another day or time that was more conducive to their schedule. A Kindergarten teacher said, "I love the webinar things. I thought that was great and I got some really good suggestions." As a teacher who attended two of three webinars live and attended the third webinar via archive, she was very excited about being provided professional development in such an interactive manner. A principal from Saddle Elementary School wrote me an email after the first webinar and attached an email that one of her teachers had sent her. The email message was the following, "This was the most fantastic, awesome, PD I have ever participated in!! There were tons of interesting sites and cool technology interactive things." The principal had forwarded it along to me with a positive note to thank me for asking her school to be a part of a pilot platform like LiteracyGrows.org. She made note that her staff was excited for future webinars.

While the concept of webinars was new to teachers, the ones who attended live or via archives did not seem to have any issues accessing the webinars or actively participating during webinars. During webinars to get the group accustomed to how to use the webinar platform the presenter or myself would ask them if they could hear us and then we would have them use the platform to practice raising their hand, adding applause, or providing a checkmark to show they were understanding. All of these

features were embedded within the webinar platform and made it more interactive for the participants so they could write text or use one of the symbols to show understanding, confusion, or appreciation.

Throughout the webinars, participants were quite active in their questions and excitement of what was being presented. For example, some comments were, "this is new for me, looks neat" or "is readwritethink.org a free website?" They were attentive and also proactive in what they were learning. All participants seemed to actively participate and would comment even if they did not have a question to ask.

The following interaction from the first webinar illustrates how excited the teachers were about using the information they were discussing. As Dr. Henry described a website called www.virsona.com where students could interact with historical figures via virtual personas, a teacher opened another window on her computer as she attended the virtual webinar and let the group know that the school system had that website blocked. Another teacher then responded and said, "We should contact Central Office to have it unblocked." Within one week of this webinar one of the teachers in attendance sent me an email to let me know that she wrote Central Office and they allowed the restriction on virsona.com to be repealed so the schools could use it. The teachers were invested in not only learning new ideas but also trying out the ideas to see how they could work within their classrooms. This was not the only incident where teachers wrote to tell me about what they were trying within their classrooms because of the webinars they attended. Another email describe how she had changed the way she was working with assessments in her tier two Response to Intervention (RtI) group based on the information from the RtI she gathered from the webinar. She had even said that she had told the other intervention teachers about the online archive of the RtI webinar so they could use it as a resource for their school.

The constructive nature of what the webinars fostered within the group of teachers who chose to participate shows great opportunities for the future growth of LiteracyGrows.org. Besides one microphone issue that was rectified via text at the beginning of a webinar, teachers who tuned in reported no problem with the platform or how the webinars were delivered. They were encouraged by the innovative ideas that

were shared and also stated that they enjoyed interacting when they had questions. One first grade teacher said,

> "I really like it because I can sit after school and listen and grade papers, but when I have a question I can ask. That may be a bad thing that I said that I grade papers, but I mean I multi-task, it's how I get things done and I really enjoy that the webinars let me do that."

The intervention of LiteracyGrows.org presents a platform for professional growth that is adjusting to the 21st Century teacher. Not only are the students that we teach digital natives; we are entering into an era where the teachers are digital natives as well. LiteracyGrows.org provides a platform in which novice and veteran teachers alike can engage in meaningful development in a time and space that is convenient to them. Later conversation will further discuss how teacher choice and collaboration are impacted by such a platform as well.

Lack of prompting inhibited user experience. When asked about possible issues with the effectiveness, efficiency, or appeal of LiteracyGrows.org teachers suggested that the intervention of LiteracyGrows.org would be more beneficial if I could send reminder emails to their email accounts about upcoming webinars or other various announcements. Another suggestion was that there should be some kind of newsletter to tell what had happened on the website. Such a reminder/newsletter could spark interest in a topic that they might have missed by just going to the home page of LiteracyGrows.org. Initially, the lack of reminder emails and newsletters were inhibitors of success for LiteracyGrows.org because teachers reported that they felt disconnected from the website, that they forgot to go to it, or forgot about specific events and the reminders and newsletters would increase their interaction with the website and the other members on the website. A first grade teacher's response provides a nice vignette for the way teachers reported feeling:

> "I don't know. I'm not on a real schedule with the whole social network thing. Even with Facebook I forget to check it sometimes and then someone will message me or tag a picture of me and then I go back on it. I think LiteracyGrows is the same thing. Sometimes I just get so busy and am doing other things I forget to login and check what is going on. I mean I want to but it

just hasn't become a habit yet. If you just sent a reminder or if there was

something interesting posted if it could be forward to us it would not only remind

me to go login but also might interest me in something somebody said."

While teachers were excited about the prospect of having such a network it was a new

tool that they had not yet integrated into their repertoire of resources. In following the

suggestions set forth by these educators, I developed a Literacy Leaflet that was sent out

every two weeks. The Literacy Leaflet was created on www.MailChimp.com.

MailChimp.com is a free online marketing, customer relation management tool that

allows users to send up to a list of 1,000 members free online marketing. Included on

MailChimp.com are the capabilities to design newsletters and track whoever opens them,

at what time, and also tracks what links they click on while they are reading the

newsletter. This platform provided the means for me to create the Literacy Leaflet, send

to all 268 possible users of LiteracyGrows.org, and track who opened the emails and how

many clicks within the email they had. Literacy Leaflets were sent approximately every

one to two weeks from late October to the end of January. Sending dates varied based on

holidays and webinar dates. The following table outlines when Literacy Leaflets were

sent and the data gathered from each email/newsletter.

Table 5.2.

MailChimp Recipient Overview Throughout the Four Months that Reminder Emails were
Used per Request of the Users of LiteracyGrows.org

Sent Date	Open Rate	Total Clicks	Forwarded Link Open Rate
October 27, 2010	11 opened (4.1%)	12	0
November 4, 2010	7 opened (2.6%)	15	0
December 1, 2010	3 opened (1.1%)	5	0
December 6, 2010	27 opened (10.1%)	26	455
December 14, 2010	5 opened (1.8%)	5	0
January 5, 2011	15 opened (5.5%)	9	0
January 12, 2011	19 opened (7.0%)	7	122
January 18, 2011	34 opened (12.6%)	35	108

Table 5.2 shows while open rates were not extremely high, the open rates and click rates
continued to increase overtime. December 14, 2010 was the only exception and while I
do not have concrete data to make this assertion, it is my belief that this open rate
declined because it was days before Winter break and the users of LiteracyGrows.org
were busy with the last few days of school before break. Table 5.2 also shows data for
links that were sent to an individual and then were forwarded on to others. The three
occurrences of this were dates that included webinar reminders. The links were sent from
multiple teachers to other teachers within their buildings, perhaps on a listserv and then
were clicked on by individuals. When a link is forwarded, the data does not show who
opened those links, just the individual who forwarded the link along. December 6, 2010
one reading specialist forwarded the link, three teachers from three different schools, and
one principal. On January 12, 2011 six teachers and one reading specialist forwarded the
link to others, and on January 18, 2011, 11 teachers and one principal sent the link to
others. These data showed that as educators became more comfortable with the platform,
there was an increase in the number of teachers who were actively involved in spreading

the word about the webinars organically. These data showed that reminders were utilized and shared between professionals as they became more invested in the intervention LiteracyGrows.org

   Building connections improvement. The users of LiteracyGrows.org also discussed the ability and ease of building connections between education professionals as an inhibitor of success as it related to LiteracyGrows.org. As LiteracyGrows.org was originally constructed, the home screen housed an online space for avatar pictures of the most recent 15 people who had logged into the website. These avatar pictures could also be seen when a user visited the member tab within the platform. As each user signed up for an account on LiteracyGrows.org they were automatically provided with a stock picture of a colorful pattern that became their default avatar until they decided to change it. While some teachers did choose to post pictures of themselves or use stock clipart images as their avatar, others chose to leave the default image as their avatar. Within the member tab a user could see the name each user provided and click on the avatar to read their profile. While this space allowed them to make connections with other professionals, it was not as convenient on the home screen. One teacher stated, "how do we know who else is on here." Similar sentiments were offered during initial interviews about the difficulty of finding friends. A fifth grade teacher stated, "it would be awesome if we could tell who these pictures are so like on Facebook we can just click on them to ask them to be their friend." Such comments were echoed by other participants who wanted to make connections easier without having to search through all of the members. If the purpose of the intervention was to connect education professionals, it was imperative that I rectify this issue to make relationship building easier.

   To correct the problem, I explored possible widgets that could be added on the backend of the website to help friendship building. After searching, I came across the ideal correction for the friendship issue. It was a widget called, *CD Avatar Bubble*. A "widget is a stand-alone application that can be embedded into third party sites by any user on a page where they have rights of authorship (e.g., a webpage, blog, or profile on a social media site). Widgets allow users to turn personal content into dynamic web apps that can be shared on websites where the code can be installed" (Wikipedia, 2011). By installing this plug-in it allowed members to hover over others' avatars and be provided

information. The plug-in offered the option of showing the following information: (a) name, (b) school name, (c) grade level, (d) experience, (e) interests, and (f) gender. While having various options was beneficial and could be used in the future. All teachers wanted was the name and school name of others so they could find friends they were looking for on LiteracyGrows.org. Therefore, I scripted the plug-in to only allow username to be shown and school name. The purpose of using username versus full name was to maintain anonymity for those members who chose to use initials or nicknames instead of full names. If someone wanted to be their friend they would have to know initials or the nickname they provided to find them on LiteracyGrows.org.

In exit interviews teachers discussed how easy it was to find other teachers and ask them to become their friend of the website. While no one specifically mentioned the plug-in that allowed a name to appear when an avatar was hovered over, the conversation of the difficulty of finding friends from initial interview data to exit interview data changed dramatically. No one mentioned difficulty in relationship to finding friends and with comment like, "it is nice to connect with others" and "it was fun to accept friendship requests" it is my conclusion that the CD Avatar Bubble plug-in transformed LiteracyGrows.org into platform that was more conducive to community building.

Evidence of Progress Toward Pedagogical Goal

The pedagogical goal or purpose of this formative experiment was to implement the intervention, LiteracyGrows.org and actively work with education professionals to co-construct an online space helped foster an online space for collaboration and reflection. Based on user feedback during exit interviews, and additional data such as login data, Google Analytics, PicNet Mouse Eye Tracking, and email correspondence the following sections describe evidence that LiteracyGrows.org as an online platform was actively utilized by educators. LiteracyGrows.org started to become part of the support repertoire that these educators utilize in their process of growth as education professionals.

Perception as Professional Development Tool

Education professionals that were interviewed about LiteracyGrows.org, or that emailed of their own volition expressed an overwhelmingly positive attitude about LiteracyGrows.org and the personalized professional development opportunities via

webinars. As the following vignette, from a first grade teacher highlights, the format of interactive professional development that could also be watched later or reviewed via archive was very supportive them as educators:

> "It's so easy to get professional development. I don't have to worry about where to go or when it is, I can either participate live or watch it later. I like this more, I interact more. I like it more when I can be there and grading papers, I can ask questions, I can re-watch it, I like it more because it is like it never leaves. I guess it just shows me, it gives me a visual, they had pictures, I guess it just showed me what I could be as a teacher."

This teacher not only liked the convenience of being able to participate in professional development but liked the format of archived webinars because he could watch the webinars as many times as he wanted. He also discussed the support that the webinars provided because of the pictures and visuals that he could refer back to as needed within his own process of growth.

As he discussed, the webinar formats provided an online space that fostered teacher participation. He even admitted that he interacted more in this type of environment than in other professional development experiences. Other teachers reported really finding the webinars supportive and discussed how they were implementing what they were learning within their own classrooms. One classroom teacher said, "I listened to the literacy and technology one later because I had to pick up my dog after school but it was really interesting. I've already signed up for epals.com and thought it would be fun over the holidays to connect with another class somewhere else in the world but I haven't heard anything back yet." This teacher again illustrates that the education professionals on LiteracyGrows.org are hearing things that are inspiring new creative ideas for them to use within their classroom. Whether it is implementing technology to enhance their curriculum or refining how they implement Response to Intervention, the webinars provided another voice for them to learn from so that they could begin to decide for themselves what works and what needs further adjustment. This process is far different from the dissemination model of professional development they were used to. A third grade teacher articulated the current issues with professional development within her school: "We sit and learn about how to use test data

to drive instruction but we never see what to do with the kids once we learn what the test data tells us." Within this example, LiteracyGrows.org is offering an online space from which they can take what they are learning about student levels and begin to derive new and innovative ways to teach students that might be missing from the current dialogue in schools today.

As the following sections describe the rates of usage on LiteracyGrows.org and the profile of three various types of users it culminates with teachers describing their perceptions of LiteracyGrows.org as a possible professional development tool. They found the interactivity and the on-demand nature of webinars appealing but also as previous data highlighted, they liked being asked what their needs were and having a professional platform that responded to their needs. As the data showed, those who participated, especially as interview participants became invested in the success of LiteracyGrows.org. Such data further underscores the need for future advancements in professional development to focus on learning instead of content deliver. If focus is re-aligned with the process of learning how this might positively affect professional development experiences and the culture of schools that right now devalues teacher voice?

As discussed throughout the findings, the participants of this study were intrigued by LiteracyGrows.org initially but were not used to being a part of a professional platform that needed their active participation in order to grow. While disconnect between the intervention, LiteracyGrows.org and some participants certainly was palpable, what was interesting was that those who were interviewed became invested in LiteracyGrows.org. Whether they were active participants or low-frequency users, during exit interviews their language changed. Instead of using pronouns such as "I think you should do this" or "I would like to see that," they began thinking about LiteracyGrows.org in terms of "we." For example, "The idea of LiteracyGrows.org is really great; we can all help each other and get better." This teacher although a moderate user, who only shared one website link throughout the duration of the study began to discuss the potential of LitearcyGrows.org in terms of a collective group. Instead of saying, "it could really help me" she spoke about it in terms of "we," the group of teachers that were members of the platform. Another intervention teacher said, "For next

year, you're going to keep it going, right? We need to decide how we can make it bigger.

If we could get more content on the site I think it would be really helpful." This teacher

was excited to be involved in the process of co-construction and was using "we" in terms

of how she and I could work together to determine ways in which we could get members

of the online platform to become more actively involved. Similarly, a second grade

teacher shared ways in which she believed we could adjust LiteracyGrows.org for next

year's implementation to make it more useful. She said, "We should have a

Comprehension Month or a Technology Month so each month users know what the topic

is and this will probably help instigate some kind of sharing so it doesn't seem so

overwhelming." Again, she uses the term we because she feels invested in the success of

the online platform, LiteracyGrows.org.

  As articulated as part of the pedagogical goal, the purpose of this study was to use

the design of formative experiment as a means to include the education professionals as

active participants in the creation of their own online space for professional learning.

While initially they questioned who would post content or who was backing

LiteracyGrows.org overtime their perceptions were beginning to shift. They were

showing signs of understanding that their voices mattered. Within the online platform

they created, LiteracyGrows.org, it was not just about the dissemination of professional

development material for them to implement, it was the beginnings of their own

community of practice. As the exit interview transcripts illustrated, those who were

involved as part of the interview process were invested in the overall success of

LiteracyGrows.org. Success was also not defined as them actively participating as heavy

users on the website, success as it related to the implementation of the intervention,

LiteracyGrows.org was that these literacy teachers were beginning to recognize that their

voices mattered. I had used their initial interviews to make modifications to

LiteracyGrows.org and they noticed. They felt that their voices were being heard.

Therefore, in the exit interviews they knew that the ideas they shared with me were going

to make a difference and they began to come up with even more ways to make their

online space even better and customized to their specifications. A shift began to occur.

Users recognized that I was not there to just implement, I was there to adjust the platform

and make it more user-friendly based on their feedback. As members such as those

interviewed and those who were becoming invested in LiteracyGrows.org notice that they have an active role in its success, they can begin to spread the word about LiteracyGrows.org. As one kindergarten teacher stated during exit interviews, "will I be allowed to tell my friends about this at other schools next year?" This teacher not only was invested in the concept of LiteracyGrows.org after she had been able to see how it worked, she was looking forward to spreading the word about it to other teachers. As will be discussed in limitations, due to the IRB, LiteracyGrows.org was not able to grow organically; it had to have principal approval for staff members to use it as a resource. Such restrictions limited the ability of users to tell others outside of their school about this resource. Further discussion of how this affected LiteracyGrows.org will following in the limitations section.

While LiteracyGrows.org had to stay within the boundaries of the IRB for initial implementation, comments like this one from the second grade teacher highlight the interest of users to spread the word about this online platform. Many participants echoed the sentiment for such room for growth. For example, a teacher who was not an interviewee or focus group participant emailed me. She was joined LiteracyGrows.org in January as it was concluding implementation. In her email she wrote:

> "I am a teacher from Washington Elementary. I am interested in learning more about LiteracyGrows.org. How did this project come about? Are you just offering this site to schools in Franklin County? What is your goal for this site in the future?"

This teacher, although not involved with interviews became very interested in the prospects of LiteracyGrows.org. Such interest shows that teachers were beginning to recognize this platform as different from their other experiences and were looking forward to the evolution of this online space for next school year.

Summary

The feedback I received is evidence that a shift was beginning to occur within education professionals who were exposed to LiteracyGrows.org. They were starting to recognize that their voices mattered and that they could truly affect their own online platform used for their own professional growth. Such data provided further validation that formative experiment, as a design was ideal for constructing on-going research that

meaningfully engages participants. The data also established the groundwork for future research to discover how this platform transforms as education professionals become more aware of their own ideologies, conceptions of truth, and use of communication for taking collective action.

The following chapter further reflects upon the intervention and how the intervention, LiteracyGrows.org would fit within a new conception of professional development that focused on learning as compared to content delivery. I describe how the constructs of communication, ideology, and truth need to work symbiotically within the model of professional development utilized, learning theory, and underlying epistemology in order to create a professional learning environment that is conducive to active and meaningful engagement by education professionals. I present a description of the intervention, LiteracyGrows.org in its final design and share how participants reflected upon their experience with LiteracyGrows.org. Moreover, how their feedback illustrates positive progression toward them constructing a new attitude toward professional development that focuses on learning instead of content.

Chapter Six: Reflection, Implications, and Limitations

"We live in a world where we have the leverage to make things happen, the desire to do work we believe in, and a marketplace that is begging us to be remarkable. And yet, in the middle of these changes, we still get stuck. Stuck following archaic rules. Stuck in industries that not only avoid change but also actively fight against it. Stuck in fear of what our boss will say, stuck because we're afraid we'll get in trouble. Most of all, we're stuck acting like managers or employees, instead of like the leaders we could become.

We're embracing the factory instead of a tribe" (Godin, 2008, p. 10).

In this chapter, I used the final two questions in the framework for conceptualizing and conducting formative experiments to help guide the reflective process of formative experiment. These two questions provided the framework to address how the intervention, LiteracyGrows.org impacted the professional development environment for these specific participants. The questions were as follows:

5. Has the instructional environment changed as a result of the intervention, LiteracyGrows.org?

6. What unanticipated positive or negative effects did the intervention, LiteracyGrows.org produce?

Reflection of LiteracyGrows.org as a Professional Development Platform

In utilizing the historical and theoretical framework established in chapters two and three, I reflected upon these two questions in terms of epistemological underpinnings, learning theory, and model of professional development. Specifically, I used the construct of knowledge introduced by Cunningham and Fitzgerald (1994) and extended their epistemological questions into three categories of worldview, knowledge, and communication to discuss how participants were situated within professional development and how their perceptions and experiences must be symbiotic with the underlying foundation of the professional development model. This chapter begins with an excerpt from my researcher reflection journal that highlights how I attempted to make sense of how the participants were situated within the larger context of professional development. I then discuss how worldview, knowledge, and communication need to be considered in future work that explores meaningful professional development. This chapter concludes with a discussion of implications for future research using online

professional platforms for professional growth and an overview of limitations to this study.

November 18, 2010, Researcher Reflection Journal:

> I have been online quite a bit with watching how the users on LiteracyGrows.org are interacting and I can see that there is interest but not as many posts as I thought that there would be with teachers talking back and forth. I think it is interesting that they listed that they wanted to have more time to share ideas and to talk with other teachers and when given the space they are not yammering away. I wish I could get online and start asking questions and really prompting them but I know I can't interfere like that. I know that some teachers have said that they feel vulnerable asking questions online and are scared about who might be on there to tell someone else that they don't know what they are doing, but even if they use a nickname there are not those sort of questions or comments on the platform yet. There is a level that they are still a little bit nervous or disconnected or maybe even still confused on what to do with the platform. I think it is interesting with Facebook and all the other online social links out there that they are hesitant to embrace or not understand how they could utilize this platform. It hasn't been that long though so I think it will be interesting to keep watching to see if anyone takes the leap to really show what he or she don't know and watch how this process of growth really occurs.

This excerpt highlights my initial attempts to figure out how the education professionals were positioned in relation to the intervention LiteracyGrows.org. While they were embedded within the formative experiment as partners on the journey to co-construct an online professional resource, there was still tension in how they were positioned. Although their feedback drove the modifications on the platform, there was more to why and how the participants mattered. As stated in chapter three, collaboration, meaningful experiences, and reflection are essential to the learning process. This chapter uses the work of Cunningham and Fitzgerald (1996) as a foundation to reflect upon why worldview, knowledge, and collaboration on the part of the participants matters to truly achieve an online platform that cultivates meaningful experiences and reflection. Understanding the needed symbiotic relationship between the professional development

platform and participants provided insight into how the intervention impacted the larger professional development environment for these participants.

The following section further reflects upon the intervention of LiteracyGrows.org as it related to how the participants were connected to the intervention. Furthermore, what specific constructs need to be further explored as we continue to learn more about meaningful professional development for the 21ˢᵗ Century. Figure 6.1 illustrates how the constructs of worldview, knowledge, and communication were used within this reflective process to better understand the intervention in order for the next post-dissertation phase of the formative experiment to continue.

Figure 6.1. Symbiotic Relationship Necessary for an Constructive Professional Development that Aligns the Model of Professional Development Being Used, Underlying Epistemology, and Learning Theory along with Participants Perceptions of their Own Worldview, Conceptions of Knowledge and Level of Communication
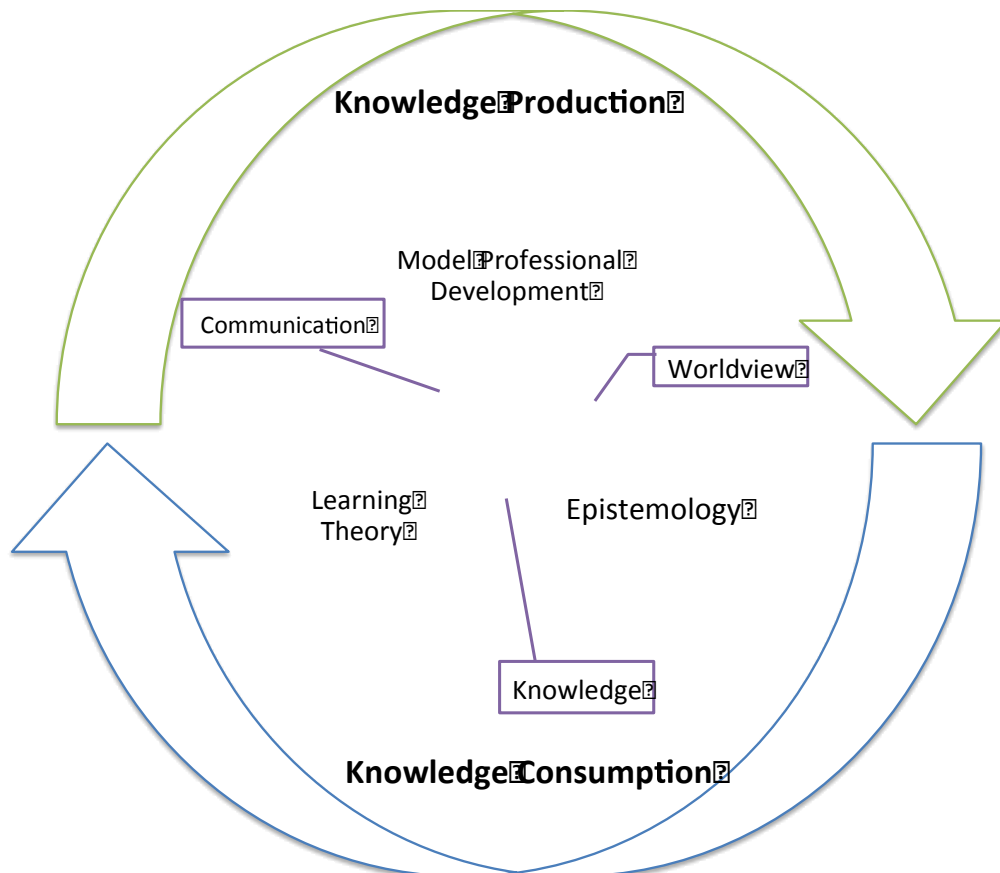
As Figure 6.1 shows, model of professional development, learning theory, and underlying epistemology was discussed as the foundations for this study but throughout reflection it became apparent that they must also coincide with the understandings of communication, worldview, and perception of knowledge that each participant within professional development holds. The following discussion will highlight that when all constructs are symbiotic it is more likely that meaningful knowledge production and consumption occurs. If such agreement does not happen, disconnect hinders the ability for meaningful knowledge construction to take place. It is when participant perception and professional development platform work together that an environment for collaboration and critical reflection is fostered. The sections below further explain participant worldview, knowledge, and communication and how they were utilized in this study.

Worldview

Worldview is the set of ideas that comprises an individual's, "goals, expectations, and actions" (Eagleton, 1991). An individual's worldview is similar to their perceptions; it is how they recognize and make sense of the world around them. Bahktin (1981) described worldview or ideology as contextually based, meaning that various societal factors influence a person's perceptions. Worldviews can be thought of as a normalizing factor in society that members of a group adhere to or a worldview can also be used as catalyst for transformation within a group or society. The following discussion describes how the participants' worldviews were normative in nature and ultimately affected their successful implementation of LiteracyGrows.org as a supportive resource for their professional growth. Throughout the following discussion the issue of worldview as transformative in nature will be addressed as a means in which teachers can re-engage in their own professional growth process.

As the intervention, LiteracyGrows.org was implemented into the ten participating schools; I began to notice that the co-construction of an online platform was not the only factor that contributed to the successful creation and eventual implementation of LiteracyGrows.org as a meaningful support network for teachers. A journal entry from my researcher's reflection journal that was later reviewed throughout coding and highlighted a written account of the issue of worldview that would only become more pronounced as the study continued:

"It is September 8, 2010 and I met with Magnolia Elementary School this afternoon. I met with their leadership team and this group was very quiet and did not have many questions at all. While they seemed to like the website, really the only thing that was said was, "So will you be putting up materials for us to use or who does that?" Then another teacher followed up with a comment like, "Did you do this yourself or is this backed by Central Office or anything?" I feel like they are skeptical of who I am and what I am asking them to do. I feel like they were confused that their content is what was going to drive the website. It was either new to them or they were not on board with the idea. I'm just not sure how to take that group."

As the excerpt from my journal illustrated, I began discussing the teachers' perceptions and within time would recognize as I went back and re-read my journal that such comments were not just about them understanding the concept of LiteracyGrows.org, it was part of the larger issue of needing to understand their own current ways of knowing. The tension existed because they were unsure if I was not going to be providing content, who would? Their understanding of structure, as it related to their role as teachers within this school or perhaps district-wide, was in disconnect with what was being asked of them as participants on LiteracyGrows.org. Their current state of knowing recognized their role as passive consumers of knowledge, not integral in the creation of knowledge. Further interactions with teachers only intensified my recognition of the importance of valuing and utilizing the education professionals' current conceptions as a place to start from that must be embedded in the process to construct a meaningful online platform that would eventually cultivate an online community of practice. Teachers discussed meeting with district-wide grade level teams and trying to plan but that all plans had to match. Teachers made reference to the push for conformity and that there was no room for creation or variation. The participants in this study described a feeling of pressure to conform to the ideals established by their current profession. They were expected to fall in-line, do what others were doing, and resist the temptation to become rogue and vary from the masses. Again, while teachers mentioned throughout the study that they liked to get together with other teachers and share ideas, within the current organizational structure, such creativity was not fostered. The school system, as an organization

pressured educators to implement material that was provided to them. They referred to it as research-based and systematized for the purpose of accountability. This pre-determined outline of how and in what way there were supposed to teach heavily influenced their understanding of their own views. They wanted the website to provide the "research-based" materials that they should use within their classrooms. A researcher reflection journal entry from December stated:

> "I think it is amazing to hear how many times teachers discuss, "research-based" materials. I suppose before I was really immersed and understood research in education I could have been confused as well about what research was, but the reliance on what is perceived to be research-based materials is staggering. I have seen on many occasions that they do not know what research provides the foundation for the programs that they are using in their schools, they are just waiting for someone from to tell them what to implement. They strictly follow what they are told and repeat what others have told them about why they should implement it and why it is the best. The conversation is never about whom or where the research is coming from that they are readily adopting. It is just assumed that if someone says research-based it must be beneficial. The reliance and need for this research-based material is engrained in their conceptualization of how to effectively teach."

After re-reading this entry I interpreted it as an illustration of how the teachers' current worldviews are influenced by the pre-completed programs and accountable nature of the current state of education (Ingersoll, 2003). Their goals were to be given information that someone else established as "research-based" and instead of adapting strategies to meet the needs of students, they understood their role was to put into practice the lessons that were provided to them. As I learned more about the ideals that helped shape their current state of understanding related to their role as educators, the beginning researcher reflection journal entry I wrote began to make more sense. The educators were not used to sharing ideas. This lack of meaningful engagement in their own process of professional growth interfered with their ability to understand a professional development model that relied on their ability to actively communicate to share ideas, collaborate to

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come to their own level of understanding, and to critically reflect about best practices in literacy instruction.

In their current worldview, although the teachers fleetingly mention enjoying the past when they met with others to share ideas, their current state of professional development was to receive information to implement the information that was provided to them. The underlying purpose in the professional development they were used to was not to encourage free thought and growth; it was for conformity. This study showed that it was not just important to focus on the technical aspects of the online platform, for future implementation and growth, a discourse must begin that engages participants in conversations that will help them recognize their current underlying perceptions and how to engage again with various perspectives from which to draw upon for future growth. If they do not recognize the hierarchical influences on their growth, they will not be aware of why they feel disconnect as it relates to support structures. As they acknowledge various perspectives they will begin to widen their perspectives on how they understand their position within the school system. Part one is aligning a model of professional development, learning theory, and epistemological foundations and part two is working towards agreement between such a professional development model and user perceptions of worldview that affect their learning processes.

Knowledge

Another aspect of recognizing various perspectives is also linked to the participants' perceptions about knowledge. Cunningham and Fitzgerald (1996) in further understanding epistemological positions asked questions that would provide insight into how individuals perceived knowledge. Specifically, "can we have knowledge of a single reality which is independent of the knower" (p.40)? An essential construct in understanding how teachers perceive their profession is acknowledging how they understand knowledge. In reflecting upon how teachers alluded to knowledge, I found that the majority of the participants were searching for answers, and their language was confirmation that they thought the answers they were looking for were separate from themselves as educators. Just as they thought I would provide answers though the content on the platform, they wanted the platform to be a place to find answers. As the data showed, they used the blog feature frequently and it was surmised that it was a

popular portion of the platform because it provided answers for what to do in their classrooms. In these two scenarios it was clear that teachers were either used to or expected there to be absolute truth to questions related to literacy instruction. Those who utilized the webinar and discussion features noticed by the end of this study that LiteracyGrows.org was different. It offered professional development using various tools that were outside the norm of most teachers. The environment offered to them was beginning to show them other, more interactive and engaging options for professional development.

It was interesting to listen to how many times, during exit interviews that teachers referred to the fact that they wished the website would have provided more answers. Whether it was through forms or lesson plans, teachers wanted more absolutes. Even though the website was implemented as an online space where they could help construct it and implement it, implementing such an intervention was hindered by their inexperience with a medium such as this. As I searched through the data, the story that was present was one in which the teachers were unfamiliar with such a setting. They were accustomed to having content given to them, and they were confused about how to utilize LiteracyGrows.org as part of their support repertoire. Teachers were waiting for this professional development model to fall into a more familiar dissemination model. They were not used to being an active part of conversations to further their professional growth. The open forum platform made many of the teachers feel vulnerable. Teachers were afraid to show weakness. In our current 'accountability' state of education, teacher voice was becoming further repressed and removed from the dialogue on how to affectively educate students. In a desire to reform our educational system and have no one left behind, top-heavy initiatives have forced conformity not collaboration (Ladson-Billings, 2009; Schallert, 2009). Such conformity has led to an immense amount of pre-completed teaching materials for educators today. The data within this study highlights that the prescriptive state of teaching we have faced over the last decade affects the worldviews and values of our educators. Specifically, as it relates to the construct of knowledge and how teachers understand it, what counts as knowledge, where it is located and how knowledge is attained? Within such an environment, teachers need an outlet to once again find their own voices and re-engage in their own processes of teaching and

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learning. Before they can be expected to utilize a collaborative model of professional development they need to focus on re-gaining their agency and autonomy, which is cultivated through communication.

Communication

Morson (2004) discussed communication as an essential component in the process of learning and connected the work of Bakhtin to his own to advocate for the importance of dialogue within classrooms as imperative for student learning. In utilizing this work, the findings from this study support the need for more dialogue in the process of not only student learning but also professional learning. Bakhtin (1981) concluded that there could be authoritative and innerly persuasive discourses mutually occurring within true dialogue. It is when authoritative voice becomes "authoritarian" that dialogue does not continue and questioning of various perspectives is not valued. The process to maintain dialogue is endless and is essential within the journey of an individual's *ideological becoming*.

It is not only a balancing act between authoritative language and innerly persuasive discourse, but it is crucial to make sure that voices are heard. As Bourdieu (1991) concurred, language is not life-less; it contains power and the ability to construct and solidify social reality. This means that what language signifies is not going to be found in the words themselves, it is whose language is legitimized and how this affects dialogue.

The concept of communication is vital in understanding more about meaningful professional development experiences. Creating a space that fosters active communication is fundamental to the success of meaningful professional growth. In an educational environment defined by accountability, the ability for teachers to actively and meaningfully communicate within their own professional development experiences are limited. And as Webster-Wright (2009) posited, the focus of professional development needs to shift from content delivered to the process of teacher learning. Such a shift has not yet occurred and in many cases is becoming more distant from the realities in schools today. McLaughlin (2011) and Desimone (2011) both focus on teacher professional development as attempting to build a community amongst teachers that focuses on using test data to drive professional development. As they work on filling the school with

individuals such as coaches, data-support teams, and advisors at the district level these additional positions to not help build a constructive dialogue, they add to the various levels of separation between the teacher towards the bottom and everyone else above them who dictates what they need to do within their classroom. Specifically, Desimone wrote that effective professional development should include (a) content focus, (b) active learning, (c) coherence, (d) duration, and (e) collective participation. While all of the factors are important to sustainable professional development either in-person or online, the list still does not take into account teacher knowledge or teacher communication. While active learning or collective participation sound good, as defined within the article in relation to the teacher it means "being observed and receiving feedback, analyzing student work, or participating in professional development activities (p. 69)." Not once is the cultivation of communication listed, which is why the focus of such articles remains on content delivery and not the process of how teachers learn.

While teachers discussed interest in the possibility of LiteracyGrows.org, they were unsure of how to participate. It was asking them to communicate in ways that were not the norm for their environment. Comments such as, "I'd like to work on getting better at talking to others" and "I like the way it hopefully opens up the literacy aspect so we can feed off of each other, I'm not using it totally yet, but I'm trying" provided glimpses of hope from LiteracyGrows.org as a prospective online community of practice. These statements showed how teacher thought they could utilize LiteracyGrows.org as a supportive network for education professionals. Before true cohesive implementation of such a tool was possible though, teachers needed time to practice communicating and re-engaging in an aligned model of professional development where active communication and collaboration was necessary for meaningful growth to occur.

It is the symbiotic relationship between underlying learning theory and epistemological assumptions along with constructive communication that needs to become the focus of professional development (see Figure 5.7). Starting the dialogue based on where teachers are currently situated within their own worldview will enhance the feelings of community and engagement within a well-aligned model of professional development.

In creating an online environment that attempted to align model of professional development with learning theory and underlying epistemology, the data highlighted that usability and sociability impacted the technical functioning of the platform. The data from this study also brought attention to the need for participants' worldviews, knowledge, and communication to matter. Future research needs to further explore the issue of alignment to determine if it affects collaboration, knowledge creation, and critical reflection.

Conclusion

As professionals, teachers should be given ample opportunity to engage in meaningful and constructive collaboration that allows them to grow as professionals. Howard and Jones (2004) contented that the Internet increased social capital, while I believe that the Internet's sociability could be used to cultivate professional growth within the profession of teaching. LiteracyGrows.org offers an online platform that engages teaching professionals within an aligned, meaningful, on-going, and sustainable online environment.

The findings showed that the components of a success model of professional development must symbiotically work together to cultivate meaningful knowledge construction and critical reflection. Teachers reported that their current model of professional development was a lot of information provided but not a lot of meaningful interactions. The disjointed model of professional development that teachers described within their schools promoted a "Waiting for Answers" model of professional development for teachers. Teachers were being told what and how to implement within their classrooms. Their district was trying to conform their practices to make them more standardized. In turn, this structure was leaving the teachers feeling that they had little control over when and how teaching occurred within their classrooms.

LiteracyGrows.org shows the potential for a model of professional development that stems from the creation of an interactive online platform. This online platform proved that teachers were excited to join such a professional network and were intrigued by the interaction that the online webinars and interactive platform cultivated. While this study established the foundation of a professional community of practice, future research needs to further explore the culture shift that needs to occur for teachers to feel

comfortable creating knowledge and consuming knowledge within an environment that relies on their active engagement.

<p style="text-align:center">**Implications for Future Research and Practice**</p>

While this study was able to provide the foundation for a 21st Century model of professional development that utilized an online platform, future research needs to extend this work in terms of the alignment discussed above to better understand professional learning. Professional development in education needs to foster long-term growth and meaningful evolution in thought. Freedman and Ball (2004) discussed this process in terms of Bakhtin's *ideological becoming.* They used ideological becoming in relation to teacher education programs and the importance of understanding the set ideals that each pre-service teacher brought with them as they entered the program. The same should occur as educators begin professional development. In understanding the values and goals that each student or teacher current held was the place where all learning began. By accepting their current ideological state and using that as a foundation to introduce new ideas meaningful learning occurred. Ball and Freedman worked to provide multiple voices from which the students could grow as individuals. The same scaffolding process can be implemented within an online platform such as, LiteracyGrows.org. Using the medium of online allows professional development to become self-paced and meaningful to users. It is this process of understanding where someone comes from in their own ideological stance and watching how they evolve into new ways of knowing that constitutes true ideological becoming.

The purpose of this dissertation was to co-construct an online platform with teachers and explore the positive and challenging aspects to such a model of professional development, throughout the process it was clear that such technical processes are inextricably linked to the ideological stances of its participants. As the platform was created and modified, the focus remained on the teachers' perceptions of the effectiveness, efficiency, and appeal of such an online platform as it related to their professional development. These reflections of LiteracyGrows.org highlight the need for future research to focus on participants' learning now that the platform itself is constructed. By including teachers in the process of construction and providing ample opportunity for them to interact on the platform the purpose was to present a professional

development model that was consistent in message: this website was built *with* teachers, *for* teachers. The goal was to determine if a cohesive platform could be created that met their needs but also provided alignment between underlying learning theory and epistemology to limit the amount of disconnect educators felt between their previous experiences with professional development. The next phase is to continue to work with teachers on the platform but begin to closely monitor knowledge construction and what scaffolds need to be present in order to cultivate such an online environment.

Further research needs to explore the stages participants go through on their journey of ideological becoming and determine how this personal growth impacts the larger online professional community. Shirky (2008) wrote about the activities of an online community of practice in terms of three levels: (a) sharing, (b) cooperation, and (c) collective action. Sharing was discussed as more one-sided and occurs when participants post items or benefit from what others are posting without providing feedback. Shirky posited that this is the "take-it-or-leave-it" phase (p. 49). The next level of engagement is that of cooperation where members of an online group begin to change their behavior to match that of the groups.' They join groups and begin to engage in conversations. The highest level of engagement is collective action. This is the point when the group commits themselves to a new way of understanding that was built upon a shared vision. It is at this point when true transformation within the members and their affect on society can occur. It is at this level that a new understanding of themselves and of their role as a teacher within the larger institution of school begins to adjust. This is the process of their ideological becoming that needs to be fostered and further explored in order to better understand how a platform such as LiteracyGrows.org affects professional growth.

Learning more about how an online environment could cultivate more meaningful PLC practices is also an important concept that needs further research. As discussed in chapter two, PLCs have had support within our education system and seem to offer structure for building in-person communities of practice. Thessin and Starr (2011) asserted that there are six aspects of effective PLCs: (a) inquiry, (b) ability to analyze data, (c) look at student work, (d) examine instruction, (e) assess student progress, and (f) reflection. These six components are presented in a cyclical manner so after reflection the process of inquiry begins again. Professional Learning Communities were discussed

in chapter two as attempting to align within the *Teacher-as-Researcher Model* of professional development; although in implementation the six-stage process is typically led by someone (Piercey, 2011). In this specific district where this study took place PLCs are not a way of learning embedded throughout the culture of a school, they are once a month, by grade level, removed from the building context, and information is provided to teachers. Again, future research needs to use the alignment between model of professional development, learning theory, and epistemology along with worldview, communication, and knowledge presented in this study as the foundation for why PLCs that are removed from a school culture and only once a month are flawed due to misalignment of the constructs mentioned above. It is my assertion, based on the findings of this study that while it is valiant to foster PLCs or an online environment for collaboration such as, LiteracyGrows.org, all efforts are hindered unless the ideals held by participants are valued, embraced, and become part of the process that cultivates their "ideological becoming." Similar to constructs set forth by Wenger (1998), (a) joint enterprise, (b) mutual engagement, and (c) shared repertoire, others who study successful collaboration in professional development have found that "mutual goals, equality amongst members, shared responsibility, shared resources, and voluntary relationships" (Piercey, 2010) are essential to components to the success of professional development that fosters collaboration. The constructs that are not included in such schemes for success are those that account for teachers' current worldviews, the nature of what constitutes knowledge, and their ability to communicate meaningfully. This study illustrates that without valuing the teachers' current stances and contextual influences, professional development models, in alignment with learning theory and epistemology will still cause disconnect. In following the precedent established by Cunningham and Fitzgerald (1996) as they studied epistemology, it is imperative that we begin to ask educators the same questions: (a) *what counts as knowledge,* (b) *where is knowledge located,* and (c) *how is knowledge attained?* In better understanding educators' perceptions, learning theory and underlying epistemology as it relates to both model of professional development and participant perceptions needs to be fostered to transform the way we approach professional development. As Webster-Wright (2009) contended, to begin to rectify the current dysfunctional state of professional development within

education we must begin to focus not on content delivered but on fostering learning. A shift needs to occur in our school systems to improve professional development and make it more meaningful. As quoted at the beginning of chapter five, Shirky (2008) stated that online groups are beginning to "work outside managerial imperatives and outside structures that [bind] their effectiveness." Teachers need to begin to actively engage in their own professional growth and as a means to support this we must offer models of professional development that are aligned both in platform and participant perception. This study showed that a platform such as LiteracyGrows.org could be the vehicle for such growth. It is time for teachers to engage in discussions, to become reacquainted with their communication skills, and acknowledge the factors that might be in juxtapose with their true feelings of wanting to share ideas, collaborate, and build a community. The co-construction of the online platform, LiteracyGrows.org was just the first seeds to be planted in a new era of professional development that will provide the space for the teachers of tomorrow to create, collaborate, and cultivate a new era of understanding their role within our education system.

Limitations: Unanticipated Effects of the Intervention

The data collected in this formative experiment focused on the pedagogical goal of co-constructing an online platform to positively impact educators to collaborate and reflection upon best teaching and learning practices. While an intervention was implemented within this study, inevitably there were unanticipated effects from the implementation of the intervention LiteracyGrows.org (Reinking & Bradley, 2008). Within this study there was one primary unanticipated effect—principal involvement affected teacher comfort.

The intervention was intended to support educators' ability to form professional networks and create and consume knowledge that they were actively invested in as teachers. As it turned out, teachers were not the only members of a school system that were interesting in exploring an online platform like LiteracyGrows.org. Two principals were very anxious to join the group and be a part of the online community of educators.

Having elementary school administrators join LiteracyGrows.org presented unanticipated effects. Teachers from these schools voiced concerns that their school administrators would be watching what they wrote and posted. They were worried that

they could not show any need for help or this would make them seem unprepared for their job. Teachers were uneasy about posting questions or perhaps introducing an idea that would not be accepted by the masses. While all of this can be connected back to the issues of communication, worldview, and knowledge, which were raised as points within the reflective process of this study, it was evident that authoritative figures using the same professional platform provided various levels of uneasy feelings.

The second limitation relates to the procedures set forth by the Institutional Review Board (IRB). While the design of formative experiment is relatively new to literacy research (Reinking & Bradley, 2008) and dealing with online environments was also new terrain for the IRB, certain protocol was placed on this study that hindered the ability for an online platform such as LiteracyGrows.org to grow organically. In particular, the IRB decided that teachers could only be told about LiteracyGrows.org if their principals approved the use of such a resource. Immediately, this decision limited teacher initiative. Moreover, it perpetuated the hierarchy of power that teachers discussed within their own schools. Instead of being empowered to choose what professional development resources to be a part of within their professional growth, they could only find out about this resource if their administrators felt it was worth their teachers' time.

Another decision of the IRB that hindered the ability of LiteracyGrows.org to grow naturally was the decision of administrator oversight. The IRB decided that a teacher could not tell another teacher at a different school about LiteracyGrows.org. The study could only take place within the constraints of the ten schools where administrators granted permission for them to learn about this resource. If teachers wanted to let others know about LiteracyGrows.org, I had to tell them that they could not say anything until after data collection for my dissertation was complete. Such restrictions placed upon this study from the standpoint of the IRB limited the evolution potential of such an online platform for organic and participant-driven growth.

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Appendix A

Pilot Study

Professional development versus professional empowerment: A pilot study related to perceptions of literacy support as it relates to literacy development

Introduction

"We need a surer sense of what to teach to whom and how to go about teaching it in such a way that it will make those taught more effective, less alienated, and better human beings"

-Jerome Bruner, *The Culture of Education*

Rationale

Many involved in education believe that reform initiatives will solve the issue of what content to teach in order to make students successful. Most recently, No Child Left Behind was implemented, which brought with it, Reading First (U.S. Department of Education, 2000). The Reading First initiative was placed in "at-risk" schools as a means to improve literacy programs so that children could have increased support to pass the standardized tests. Reading First specifically integrated literacy coaches into these "at-risk" schools to facilitate professional development and disseminate current strategy instruction. While No Child Left Behind is a federal mandate, Reading First was used as a support system in troubled schools for the last six years. Schools granted Reading First monies began the initiative in 2003 and it will end in 2009. Implemented with Reading First were required professional development sessions led by the literacy coach within each Reading First School. This study sought to explore the nature of the support provided by Reading First within one specific elementary school.

Review of Research

Over the past decade, research conducted discusses the position of a literacy coach and the role of a literacy coach in facilitating teaching professionals in developing their strategy instruction. As the position of a literacy coach has been described, very few studies have examined the role of a literacy coach defining its position or tasks within the context of varying schools. Currently, many researchers identify the need for an increased understanding of achievement data as affected by literacy coaches and the role they play in literacy attainment in elementary schools (Greene, 2004; Joyce &

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Showers, 2002, p.93; Elish-Piper & L'Allier, 2007; Price & Robbins, 2007). Researchers agree that literacy success is essential, while the means by which children achieve is being studied. Denton and Mathes (2006), in an on-going research project, are examining what types of literacy coaching are most beneficial to students engaged in certain programs as a means to increase students' literacy accomplishments, while other research describes coaching models as activators of reading success (Perks, 2006). Further research has described the evolution from reading specialist to literacy coach in our schools today, and the confusion that exists in defining such positions, including the qualifications necessary for literacy leaders (Dole, Liang, Watkins, & Wiggins, 2006; Allington, 2006; Quatroche, Bean, & Hamilton, 2001).

Dole, Liang, Watkins, and Wiggins (2006) conducted a survey of 50 states and concluded that reading professionals, specialists and coaches, may not be receiving the proper training to adequately position themselves as literacy leaders in schools. These researchers found disconnect between the knowledge base of reading professionals and their ability to cultivate teachers within their buildings to become literacy leaders. Dole et. al. discussed the need for more training for literacy coaches on how to instruct adults about new literacy strategies to use within their classrooms. While literacy coaches may have the some experience teaching children, the transition to teaching adults might need more focus if the role of literacy coaches are to stay in schools. In hopes of learning more about literacy coaches within schools, Rainville (2007) completed a study that sought to describe the situated, constructed identities of three literacy coaches in New Jersey. Her study utilized three coaches who were all associated with the State Department of Education in New Jersey, while detailing how their roles influenced their individualized identities within each of their schools. She found that each literacy coach had a different identity within their school that was complex, situated, and shaped by the context of their school environment. Rainville (2007) determined that each coach fulfilled various roles within their elementary school; some completed more administrative tasks while another coach worked more with students. The interactions that comprised each of the literacy coaches' days helped shaped their identities as literacy leaders. While her study explored the situated roles of literacy coaches in school, this pilot study hoped to gain more insight into how teachers and literacy coaches are

supported within their current positions and in what ways these support structures could possibly become more effective.

Significance

The issue addressed in this pilot study is how teachers and literacy coaches are currently supported or not supported within their school. This work seeks to extend the conversation related to literacy coaching and professional development as it relates to literacy, through an increased understanding of the support structures in place for education professionals and those structures that may be revitalized to become more effective. The information gained from this pilot study questionnaire will be used to aid in the creation of an on-line portal meant to further assist teachers and literacy coaches as literacy leaders within their respective schools.

Purpose

The purpose of this exploratory study is to further understand how education professionals are supported, specifically as it relates to their growth as educators. Teachers and literacy coaches were asked a variety of 15 forced-response and open-response questions to further understand how they are currently supported as education professionals. The information gained from these questions was used to further describe how one particular elementary school currently interprets their understanding of support and specifically how they perceive their development as education professionals as it relates to certain support structures.

Research Questions

1. How do teachers and literacy coaches currently feel supported as education professionals?

2. What is the nature of teachers' and literacy coaches' current participation with professional development?

3. What specific areas of professional development could be reconstructed to facilitate a greater sense of growth as education professionals?

4. What on-line strategies could be employed to further assist teachers and literacy coaches?

Research Design

This study was an inquiry into the perceptions of teachers and literacy coaches as they read and responded to items on a pilot questionnaire. I administered this pilot assessment as an inexpensive, brief, and informal evaluation of a preliminary questionnaire that I may possibly use for an introductory questionnaire within my future work. Alreck and Settle (2004) suggested that checking possible questions from a questionnaire with respondents could provide valuable information about the response effect and sources of biases within a questionnaire. The interpretations of features for this particular pilot questionnaire will assist in identifying patterns and attitudes of respondents, which will assist in building a thick description and understanding of the possible support structures that are in place for teachers and literacy coaches.

Role of the Researcher

Vallance (2001) suggested a researcher should seek access through introduction and referrals (Berg, 2007). As the researcher, I relied on this definition to make myself known in the field. I had no prior attachment to any of the participants in the study; therefore, I relied on initial contact and then the process of "snowballing" to gain further entrée and access into the field (2007, p. 175). I began by sending an e-mail invitation to all 17 teachers and one literacy coach within a southeastern elementary school in which I asked them to take a pilot questionnaire. Within this e-mail I also asked for volunteers to complete the questionnaire while I came in and recorded their thoughts and opinions related to each particular question. After obtaining their consent to participate in my study, I established a day and time that worked for each of the three participants that agreed to take the questionnaire in my presence.

Participants

The sample for this pilot questionnaire was 17 elementary school teachers and one literacy coach from a public school district located in the southeast. All possible participants were contacted via a mass e-mail and asked to volunteer to participate in this pilot questionnaire. The initial contact e-mail also asked for volunteers to complete the survey while I recorded their thoughts about the composition of each question. In total, six teachers responded to my e-mail. Specifically, there were three teachers that allowed me to sit with them while they completed the pilot questionnaire. Two of these teachers

replied via e-mail to allow me to come into their classroom, while one teacher was referred to me by a colleague as someone that would be able to provide in-person feedback about the questionnaire. The other three participants did not contact me in regards to completing the questionnaire while I recorded their thoughts, but they did complete the questionnaire and submit it anonymously. The one literacy coach chose not to take the pilot questionnaire in any capacity. Including the three teachers that met with me to take the questionnaire and the three teachers that completed the questionnaire individually, six teachers completed the on-line questionnaire in total. The other 11 teachers and one literacy coach all opened the e-mail, but abandoned the survey before answering any questions. My response rate for the questionnaire was approximately 35%.

Setting

One elementary school's teachers and literacy coach, from a large southeastern city were asked to participate in this pilot study. Exact demographics were not available for the teaching staff, however, the school's student population was 50% Caucasian, 21% African American, 24% Hispanic, and 5% other. From the questionnaire I can report that all the participants were teachers, while the literacy coach did not respond. Three teachers reported that they taught kindergarten, one taught first grade, one taught third grade, and one taught fifth grade. Two teachers had one year of teaching experience, while two other teachers had two years of teaching experience. The next teacher had four and a half years of teaching experience, while the last teacher reported having 41.2 years of teaching experience. None of the six participants reported having any coaching experience or had been any other position within a school besides a classroom teacher. Although gender is not known for all six participants, I am able to report that the three teachers I interviewed in-person were all female.

Data Sources

Interviews/Question creation. The main source of data for this pilot study was interview data. Each interview was conducted at their elementary school within each respective classroom and was audio taped. All interviews varied in length from 15 minutes up to a half hour. Interview topics ranged from question design to detailed explanation of why participants were responding to a question in a certain manner. The

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three interviewees used this time to further explain what they were writing and to further validate their choices for other questions.

After reading about the art of creating appropriate questions, careful consideration went in to the design of this pilot questionnaire. Fowler (1995) stated that a questionnaire or survey would be no better than the questions that it asked; therefore, this pilot questionnaire is just a small step toward better understanding the responses that my questions elicit. An open-ended think aloud protocol was used in this piloting process to encourage those participants that were interviewed to expound on certain issues that arose as they completed the on-line questionnaire. The open-ended think aloud protocol was very informal and was used to encourage responses from the three participants that were interviewed. If an interviewee began to address an issue or concern related to a question's design I would ask for clarification when needed. I also encouraged the interviewees to speak of positive and negative components surrounding the design of each question as they commented. The information gathered during the response effect interview was not only used to inform a possible future questionnaire, but it was also used to triangulate the data collected by the questionnaire and also in relation to the field notes I recorded after each interview.

Questionnaire. A 15-question forced-response and open-response questionnaire was delivered to all 17 teachers and one literacy coach via e-mail. Accompanying the e-mail was a short paragraph explaining the questionnaire and the anonymity respected of any participant. The questionnaire was entitled: "*How are you supported?*" The questionnaire was comprised of questions related to demographics, kinds of support, and technology as a support resource.

Field notes. After I went to each interview, I would reflect on my experience through the use of field notes. I used a digital voice recorder to record my thoughts about my experiences and perceptions of the information I was gathering. Each of these field notes was later used as a reflection piece to better inform my understanding of the data I had collected about how the teachers were interpreting each of the questions on the pilot questionnaire.

Data Gathering Procedures

The data gathered for this pilot study occurred in two ways: (a) virtually and (b) in-person. The virtual data gathering occurred using an on-line survey design system, surveygizmo.com. This particular website allowed me to create a questionnaire, send it out to possible respondents, and then track the progress of each pending questionnaire invitation. I first created a 15-item questionnaire and using school e-mail accounts of 17 teachers and one literacy coach. I then invited each of these individuals to complete the on-line questionnaire. As each of the six total participants completed the questionnaire, as the administrator of the questionnaire on surveygizmo.com, I could monitor the rate of completion. I allowed the link to the questionnaire to stay active for one month. During this one month six teachers responded and no literacy coach, while the other 11 invitations to participate were listed as viewed and abandoned without an attempt to complete any question.

The in-person data were gathered during this one month as two of the six teachers responded to my initial e-mail asking for volunteers to be interviewed as they completed the questionnaire. This contact also snowballed into one other teacher agreeing to meet with me to be interviewed as she completed the questionnaire. I then proceeded to meet with the three participants in-person to interview them as they completed the on-line questionnaire. Each participant read the questions aloud and then proceeded to comment on their particular interpretation. If I needed further clarification, I asked the participant to elaborate with more detail so I could further adjust the question in the future. In some instances, I also encouraged the participants to provide insight into how they would like to see the question asked in the future to make the questionnaire more understandable to possible future respondents. All information was recorded using a handheld audio recording device.

After each of the interview sessions I also recorded my own set of audio field notes reflecting on the interviews with each of these three participants. I used these audio recordings during the analysis process to further interpret the data I had gathered through interviews and the questionnaire. All three means of data collection were used to triangulate my findings throughout the data analysis process.

Data Analysis Procedures

As a means of working toward interpreting the various pieces of data collected throughout this pilot study I attempted to view the data using grounded theory (Strauss & Corbin, 1990). I viewed the data in a holistic manner to then analyze the themes as I interpreted them to further learn about the issue of support as it related to these particular participants. In approaching the data in this way I utilized the "Spiral Research Approach" (Berg, 2007). Berg (2007) discussed the Spiral Research Approach as a means to work through data in a purposeful and flexible manner. Berg (2007) contended ideas, theory, design, data collection, analysis, and dissemination are cyclical in nature and not linear. Ideas can occur first and can also be revisited throughout the analysis process, as well as theory, design, data collection, and analysis. In using this analytical format, I progressed in my analysis through utilizing a series of open and axial coding where I developed codes that assisted in my understanding of the data.

Specifically, I first worked through the data and developed seven themes: (a) professional support, (b) practical support, (c) collaboration, (d) effective professional development, (e) assistance with creative strategies, (f) technology support, and (g) experienced teachers. Professional support, practical support, collaboration, and effective professional development were all themes that I labeled as teachers answered the first research question, which asked about their perceptions of support. Creative strategies and technology support were specific topics that were found to be helpful by these specific teachers in their professional development sessions, which addressed my second research question related to the nature of current professional develop sessions within this elementary school. The last theme labeled experienced teachers as valuable assets within schools. Initially, I thought this tied in with my third research question, which asked about how to reconstruct professional development to create a more effective sense of growth by education professionals. Many teachers listed experienced teachers as vital components of their success within the teaching profession, but utilizing veteran teachers within professional development settings was not discussed. In creating these seven themes I tried to develop a clear outline that would tell a story that answered my four research questions. All questions seemed to have substantial data connected to them within these seven themes except for the last research question that asked about online

strategies that could be employed in the future that teachers might find helpful. It was at this point that discovered that my themes were not inclusive to all the data.

After working through these seven themes, the themes seemed to overtake the data. They were too divisive to illustrate a cohesive picture related to how these specific teachers perceived their current support and how they could be better supported in the future. While these initial seven themes allowed me to work through the data and cluster topics together, the themes were broad to articulate the overall message I received from these particular teachers. I then revisited the data to determine how these themes could be connected.

From these seven broad themes, I analyzed further to create an overarching way to interpret the data related to support that teachers and literacy coaches received by creating two main themes: (a) professional empowerment and (b) professional development and one subtheme: (c) collaboration. Within each these two main themes I felt it was fundamental to include an embedded theme of collaboration. As I revisited the data on multiple occasions it became increasingly evident that collaboration was a substantial part of explaining what types of activities and interactions occured within professional development and professional empowerment sessions. Collaboration is one component that helps to construct a deeper understanding of what differentiates the two main themes.

Instead of trying to focus on seven themes I decided to develop two themes and one subtheme for each to develop a more thorough understanding of these teachers' perceptions of support as it related to literacy development. Professional development versus professional empowerment encapsulates the other seven themes to tell a story that developed a greater understanding of support and collaboration. These two themes and one sub-theme assisted in further articulating how these specific six teachers perceived their structures of support within their particular literacy community.

Findings

The following interpretation of the pilot survey data will discuss how teachers perceive their support structures. As I searched through the data, it became evident that the teachers pulled apart their responses related to support in two classifications: (a) practical support or (b) professional support. As I started to listen, read, and analyze

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responses the teachers largely spoke of support that was meaningful and support that was not meaningful within their position. One teacher stated, "when the literacy coach or other teachers model a new strategy for me I really think it helps, but modeling rarely happens." This teacher finds value in concrete examples of how to engage in new strategies, while she feels that she is rarely supported in this manner. She continues by describing a typical professional development session:

> "We get a full sub-release day and we sit in the coach's office while she tells us how to administer or use the data from a test. She tells us we'll get to work with the students to try out this new diagnostic practice and then we just waste the day and we never get to work with the kids."

This description outlines a typical professional develop session as perceived by this teacher. She feels that the sub-release day could be beneficial but she is never given the opportunity to utilize this knowledge within her classroom. The meaningful support discussed by this teacher that includes practical application and demonstration is not currently what she feels she is receiving within her professional development. As I listened and reviewed data, teachers started to separate support into two categories. The meaningful or effective support many of them referred to as practical support, while the ineffective and less meaningful support was labeled as professional support.

In discovering this dichotomy between their perceptions of support, it became increasingly evident that the teachers viewed most mandatory in-school professional development as ineffective and less meaningful. From this understanding, I started to conceptualize the two main themes: (a) professional development or (b) professional empowerment. Common traits of what all the teachers found to be supportive within their position as teachers could be found to construct a narrative around these two main themes. It is my assertion that professional development traits can be described as more stoic and arbitrary. Professional development, as it is currently used in this specific school seems to have qualities that replicate top-down lectures meant to tell teachers about what they are expected to do within their classrooms. In this view of professional development the teachers are considered vessels that are supposed to be filled with knowledge versus active participants able to engage in co-constructing their own knowledge and understanding. As teachers describe practical support,

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or what I would call, professional empowerment their experiences are far more collaborative than those described within professional development settings. Professional empowerment creates a space where teachers can actively collaborate together, share ideas, and develop new ideas for teaching and learning. Within professional empowerment sessions, teachers are energetic participants, engaged with the topics, willing to grow and use what they are learning within their profession. This data showed that within professional development sessions collaboration seems to be lacking, while in professional empowerment settings active collaboration occurs, which teachers find helpful in their growth as professionals. In the following analysis I hope to provide the foundation for why education professionals need professional empowerment versus the dated version of professional development.

Professional Development

When initially asked about the top three ways that these particular teachers found support none of them mentioned professional development sessions. Half of the teachers listed "other teachers" as the most important outlet for finding support (Appendix I). Similarly, half of the respondents also checked that they were somewhat dissatisfied with their current professional development (Appendix J). One kindergarten teacher stated, "We only get reading PD and it is maybe supportive in attitude but not practicality." This specific teacher begins the discussion of the distance she may feel from her professional development. She does not recognize her sessions of professional development as applicable to her literacy instruction. Another teacher stated:

> "We need more or regular follow-ups for any concerns or issues that were presented…administrators following through with support they say they will provide, but then they disappear and later only criticize for tasks not completed or not turned in on time, not asking why or what help is needed, only scolding."

As described by this teacher, her particular experience with professional development has been incomplete. She describes a scenario where teachers are provided with new information and the follow-up needed to ensure their understanding and correct implementation is not occurring. She feels that instead of having constructive conversations she is instead reprimanded.

This scenario lays the foundation for the most significant difference between professional development and professional empowerment. The way that professional development is being implemented now, teachers feel as though they are subordinate to those who are in charge of professional development. These teachers describe feelings of distance and exclusion rather than collaboration and inclusion

Collaboration. Within the current implementation of professional development, there seems to be a lack of collaboration and co-construction of knowledge. This deficiency may decrease the effectiveness of professional development and increase the potential distance teachers feel between professional development and practical application. As these specific six teachers responded to their perceptions of support it is clear that the number one support system they have is other teachers. An important aspect embedded into successful professional development seems to be collaboration. Currently, with the model of professional development within this school collaboration is missing. Teachers do not feel that they have a chance to participate within professional development. The data from this pilot study shows that the majority of open-ended responses included teachers stating the importance of other teachers or other education professionals as supportive outlets. Typically listed by the teachers were other professionals within their building such as teammates, reading coach, mentors, special education staff, or administrators (Appendix P). Largely these teachers felt that other professionals were vital to their perceived support within their profession. Only twice was the Internet listed as a second or third choice of support. The response of other teachers or teaching professionals provided insight into the importance of collaboration. The teachers who participated in this study clearly felt that interaction with other professionals was vital to their success as education professionals. The collaboration they described as helpful was not being enabled within their current professional development sessions.

When three of the teachers were more closely interviewed they told about the amount of actual time they received to collaborate. One teacher stated, "We get a planning period once a week to plan as a team, and usually the coach is there to tell us what we need to know." This statement addressed the infrequency of team planning and also raised a concern about the role of the literacy coach. In this quote the teacher says

that she is "told" what she needs to know by the literacy coach. The use of the word "told" illustrates an underlying issue within this literacy community. Are teachers being asked to collaborate and co-construct knowledge or are they constantly being "told" what and how to instruct? As shown in a previous vignette, the teachers also perceive the administrators as being in a position to reprimand their actions. Similarly, this teacher discussed subordination as her position related to the literacy coach. Another teacher writes, "I would like a reading coach that is only a reading coach." These particular teachers are perhaps illustrating disconnect between themselves and those who provide their professional development. Specifically, their perceptions of professional development seem to be ones of control and mandated topics versus true collaboration.

Similarly, a teacher during the interview process spoke about the various positions of the literacy coach within their school. She stated that there was a lack of modeling or engagement on the part of the literacy coach because she was too busy dealing with other issues within the school. Snow (2006) described a similar setting when he described the administrative roles many literacy coaches were assuming within school systems. As noted by this teacher, in order to be a more effective literacy coach there should be clearly defined roles and expectations. Perhaps these teachers are confused on the role or power a literacy coach many have within their school community.

Not only the specific interactions between teachers, literacy coaches, administrators, and other education professionals should be explored, but the types of interactions and issues comprising these interactions should also be examined. For example, various open-ended responses correlate the literacy coaches and Title One teams to testing. One teacher stated, " We have a great Title One team that meets regularly and gives support in lessons, testing, and recording data." She describes a type of professional collaboration that occurs and revolves around test scores and possibly correlates to prescribed lesson plans. Another teacher wrote, " The reading coach helps disaggregate data and will test kids if we can't get it done." Again, the collaboration and symbiotic relationship revolves around the administering and grading of tests. Support, collaboration, and professional development have been linked to issues of testing, not of best teaching practices.

According to Webster's on-line dictionary, the definition of collaboration is the act of working jointly, a recursive process where two or more people work together for a common goal. Although many of the above examples show teachers working with other professionals, the component that is perhaps missing is the recursive aspect of collaboration. In most of the scenarios, teachers are telling about events that set them up as the subsidiary of knowledge, but they are rarely if ever afforded the opportunity to become the foremost expert on a topic. Within the current hierarchy of structure, the teacher rarely feels that she has the agency to demonstrate expertise within a given topic. I would conclude that this structure is perpetuated within professional development settings—teachers feel isolated, unengaged, and mandated upon without contributing to their own growth and development as educators. Their sense of agency and autonomy is depleted by a constant top-down approach to their development. During an in-depth interview, one teacher put this assertion into words:

> "A lot of times we just sit and listen and we never have time to do anything with it. Because we just sit and they'll say today at the end of PD we'll have time to test our kids but we just sit and listen to something we've already heard for three hours and then we have no time left to test our kids. We waste our time a lot if it's an in-school professional development. Now if we go to a conference then that doesn't really waste our time because you can go to the ones you know will be helpful because they are actually what we need."

According to this teacher, she describes the professional development sessions that occur in school as stoic and unproductive. She stated that she just sits and listens and is never actively involved in her own development. Her perspective on professional development encapsulates the outdated version of professional development—one where teachers are not interacting and engaged within their own growth as professionals. The next section will provide a new vision of professional development—professional empowerment. Using the data that described perceived effective support structures by these specific six teachers, I will discuss the difference between what they felt was effective and meaningful components of support versus the previous notion of professional development.

Professional Empowerment

The theme professional empowerment is in contrast with professional development. As shown through this particular interpretation of the data, professional development as it is currently implemented does not allow for interaction and engagement on the part of professionals. Many of the teachers feel the need to separate practical support from professional support because they are perhaps not making the connection between their professional development and how this can assist them with their everyday literacy instruction.

In contrast to professional development and issues of support that these teachers found ineffective, they spoke of ideas and components that were supportive or would be supportive of their profession of teaching literacy. When speaking of successful support, one teacher wrote that she felt most supported when she was "allowed and encouraged to be creative in designing and implementing engaging activities." Her description of what she liked about this type of support speaks to the level of autonomy and engagement she felt when she was treated as a professional. Instead of being "told" what to do or "scolded" by an administrator, in this quote the teacher finds encouragement to be supportive. She is given an opportunity to engage with the knowledge she has and encouraged to try new strategies of teaching and learning with the students in her classroom.

Collaboration. Collaboration within the confines of professional development was hierarchical and seemed to be mandated commands verses conversations that allowed for co-construction of knowledge. When reading and listening to teachers provide responses for this questionnaire, effective collaboration seemed to be vital to their perception of support. One teacher who had taught for 41 years wrote:

> "I enjoy visiting other schools to see how teachers do things differently. I always come away with something new that I try in my classroom. It is not easy to do that very often so a live chat with other teachers would be the next best thing to physically being there."

This quote was written when this particular teacher was asked in the concluding question if there was anything further she would like me to know about how she could be better supported. In her response this teacher acknowledged that her essential growth and development occurred when she could interact and engage with other teachers. This

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would be an example of professional empowerment. Providing teachers with the time and resources to explore other ways of teaching through authentic experiences worked for this teacher of 41 years and was expressed as the main way she would like to be facilitated in the future. Another teacher mentioned that she would like to have help finding new and innovative ideas to use in her classroom. Again, both teachers are responding to these questions of support and asking for authentic and engaging ways to interact with other professionals.

When asked to rank the top five things that would support them as educators these six respondents were 100% in agreement that links to other websites would be helpful, while pictures of classroom ideas ranked next, and then tying with 50% agreement were children's reading lists, helpful strategy instruction hints, lesson plan ideas, printable materials and concluding with live chats with other educators (appendix J). These rankings can be interpreted to mean that teachers would like hands-on materials or help finding strategies that work with their students. Furthermore, this list could project that the collaboration that would best accommodate this type of assistance and support would be through other educators sharing strategies that work. Teachers seem to value the support they get from one another while growing as professionals by engaging with others in their same profession. When this type of collaboration does not occur teachers may begin to feel alienated. As one teacher stated, she rarely gets help from her administration or staff. A comment like this contributes to the understanding that the types of support and collaboration currently in this specific school community are not conducive to growth and development, rather isolation and mediocrity.

<center>Discussion</center>

This pilot questionnaire sought to explore the types of support teachers and literacy coaches were receiving in their schools. Although the literacy coach did not respond to the questionnaire I was able to learn more about the perceptions of teachers as it related to their support systems. Specifically, in this paper I explored the support or lack their of through professional development. Clearly documented by these particular teachers was the value of constructive collaboration between education professionals. I attempted to discuss my interpretation of the dichotomy presented in the voices of the teachers as they spoke and responded about support. As a means to discuss this

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dichotomy, I created two themes: (a) professional development and (b) professional empowerment. These specific teachers felt that their professional development lacked the kind of constructive collaboration that would be useful to help them grow as professionals. They were not carrying over the practical components of these professional development sessions into the application of more effective teaching within their classrooms. In many instances it was because the professional development sessions centered around testing protocols and learning how to score new assessments, not information applicable to making these teachers more effective.

What I gathered from the data was the perceived effectiveness of interaction and engagement as successful components of a meaningful support system. The teachers all mentioned other teachers and collaboration with professionals as activators of successful support. This type of support system afforded these teachers an opportunity to actively participate in their own development versus stoically sitting and listening without any engagement.

The differences between professional development and professional empowerment can be paralleled with the introduction of Web 2.0 versus Web 1.0. Alexander (2006) described Web 1.0 as the first generation of the World Wide Web and the personal use of the Internet to advance individual person's needs. Products that were involved with Web 1.0 were programs such as PowerPoint, MicrosoftWord, personal web pages, and individualized links to websites. In contrast, Web 2.0 is completely interactive and encourages active participation. People now engage with multiple individuals on a constant basis and co-construct knowledge through the use of mediums such as Google Groups, Wikipedia, Wikis, blogs, Facebook, MySpace, Linkedin, and Twitter. Just as the technological world is advancing to a more collaborative setting that affords individuals the chance to actively interact with one another, the notion of professional empowerment is fundamentally the same idea.

Conclusion

As professionals, teachers should be given ample opportunity to engage in meaningful and constructive collaborative sessions that will allow them to grow as professionals. Howard and Jones (2004) contend that the Internet has increased social capital whereas I believe that professional empowerment could be used to do the same

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within the profession of teaching. Instead of teachers reporting that they are being told what to do and reprimanded if rules are not followed exactly, a more constructive platform needs to take hold within the profession of education to deliver professional empowerment in a more collaborative manner where educators can grow from meaningful and authentic experience.

Limitations

The first limitation to this study is that it was a pilot study to learn more about the response effect of certain questions. Although this questionnaire provided valuable information, the sample was small and perhaps not representative of the elementary teaching population of this particular area. Only one school was included in this study due to time and resources, although in the future nine other sites will be added to the sample.

Non-response bias was also an issue that contributed to the limitations of this study. The non-response bias of those that chose not to complete the questionnaire could be in relationship to various factors such as: (a) end of school year, (b) uncomfortable not knowing the researcher, (c) confused by the quesionnaire's purpose, or (d) uncomfortable with an on-line template. These are just possible scenarios of why certain teachers and one literacy coach chose not to complete the questionnaire, but may possibly bias the results. As previously mentioned, I had approximately 35% of the sample respond, however all the responses were from teachers. The data only provided insight into the way teachers may feel related to their support, which may not be representative of the views of literacy coaches.

Future Research

This pilot study is one step closer towards developing all the phases of a study that will explore the effectiveness of an online, interactive, modeling platform that provides practicing literacy teachers with a venue for professional empowerment and growth in literacy instruction. In my future work I hope to expand the conversation of a literacy coach from person-to-person coaching to an interactive, on-line support system that provides teaching professionals with continuous, collaborative, community building that facilitates the empowerment of teachers and demonstrates effective literacy practices. Not only will the online literacy coaching platform be a new way to share effective

literacy strategies, it will also be a space where dialogue between teachers is encouraged to cultivate professional development.

Previous research has described the position of a literacy coach and the role of a coach in facilitating teaching professionals in developing their strategy instruction, however a research gap exists in effective types of literacy coaching, especially in relation to on-line communities that may empower teachers for positive, collaborative change within literacy programs. While social interaction, shifting dynamics, and modeling are found to be important to the effectiveness of literacy coaching, Nowak (2003) reported that teachers had trouble communicating with in-person literacy coaches and were rarely self-reflective. In contrast, results from an online mentoring program of first year teachers showed a positive impact including "increased emotional support, decreased feelings of isolation, increased confidence as teachers, more enthusiasm for work, increased reflection, ability to adopt a more critical perspective, and improved problem-solving skills" (DeWert, Babinski, & Jones, 2003, p. 317). My future work hopes to cultivate a supportive and reflective community where all literacy teachers can develop their full potential as empowered literacy leaders.

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Appendix B

LiteracyGrows.org: An Online Community of Practice for Teaching Professionals

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"The knowledge of experts is an accumulation of experience–a kind of 'residue' of their actions, thinking, and conversations–that remains a dynamic part of their ongoing experience…communities of practice do not reduce knowledge to an object…they serve as a living repository for that knowledge" (Wenger, McDermott, & Snyder, 2002, p.9)

LiteracyGrows.org is an online community of practice for teaching professionals focused on literacy instruction. As a previous kindergarten teacher for the District of Columbia Public School System, I became aware of the lack of time and space for teachers to share ideas, engage in meaningful discussions, and collaborate to create new and innovate ways to teach literacy to their students. Current teachers in the field also described this lack of time to engage with other professionals in detail. Specifically, teachers felt that their professional development was unrelated to their specific needs and did not allow for time to collaborate with other professionals to learn from one another.

This website was developed and is in it's BETA phase, which means that with your feedback and assistance, I am committed to working with you to make this an online community of practice that will support you as professionals. Within this online space you can ask the questions that you need answers to, you can post content that will help your fellow teaching professionals, and collaborate to develop new ways of thinking and growing together. Online professional development sessions will also be offered on topics chosen by you! Just let me know what topics interest you and I will work on finding a presenter that meets your needs. These professional development sessions will be presented in the form of a *Webinar*. A webinar is a just like a seminar but is presented online. Once a month you will be able to vote on what topic would most help you as a literacy teacher and a webinar will be offered on the most voted on topic. During these webinars you will be able to watch live video and ask questions to the presenter. After the webinars, all sessions will be recorded and archived online under the 'Classroom' tab so that you can revisit them at anytime.

The possibilities of how you can utilize your online professional community of practice are endless. I hope each of you find a way to make it meaningful to

you. I am very excited to embark on this journey with you to co-construct an online space that is fully developed to meet your needs as professionals. Please feel free to contact me at any time with suggestions, feedback, questions, or concerns. I am here as your agent of change to make this website as user-friendly as possible.

I hope you enjoy having an online space to work with your colleagues!

Sincerely,

Susan Hart
susanjhart@gmail.com

How to Get Started

I. <u>Login Information</u>
   a. Go to <u>www.LiteracyGrows.org</u>
   b. On the right side of the screen, above the login space, it asks you to create an account
   c. Click on this link
   d. It will ask you to create an account with the following information:
      i. Username (all lowercase, no spaces)
      ii. Email: use Fayette County email address
      iii. Password and password confirmation
      iv. Security question

II. <u>Profile Information</u>
   a. Name (as you want others to see it on website)
   b. Name of your current school
   c. Grade you teach
   d. Experience (how many years you have taught)
   e. Interests: What would you like to learn more about
   f. Female or Male

III. <u>Avatar (Profile Picture)</u>
   a. You can upload a picture at this time or choose to continue and add a picture at a later date

IV. <u>Registration Email</u>
   a. After you sign-up you will receive a registration email at the email address you provided
   b. Go to your email and click on the registration email to join LiteracyGrows.org (if it is not in your email, check junk email inbox--Fayette County's system has sent a few emails to this location by mistake)

Start Sharing with Other Teaching Professionals

Account Information
- Top of the website on the left—account information
- This is where you can change your profile, change your picture, or look at what you and your friends are saying and posting

Notifications
- Lets you know when you have friend requests

Tabs

Home: Always brings you back to the home screen. This is where you can find recently active members, upcoming literacy events, announcements on the chalkboard, or links to useful blogs.

Activity: Where you can see the activity of the entire website. What documents, comments, or questions have been posted. Use this tab to ask general questions or make non-specific comments.

Members: Lists all teachers that have signed up on LiteracyGrows.org. Ask them to be your friend by sending them a friend request from this page.

Groups: You can create your own group or join already created groups. Groups can be created based on grade level, topics, or ideas—it is up to you! Groups are a great way to share and post documents to one another. You can upload lesson plans, power point presentations, pictures of word walls, etc...

Forums: If you have specific topics to discuss or an exact question, click on forums to add your topic to the discussion board. You can also choose to add your question within an existing group by selecting the group from the dropdown menu at the bottom of the page.

Calendar: Organizes literacy events across the state of Kentucky. If you have any dates or events you would like me to add, just email me or write to me on the website!

Classroom: This is where you will find the webinar links. You will click on this tab to enter a webinar and also return to this tab if you wish to review or re-watch any of the previous presentations.

About: Introduction to who I am and the purpose of LiteracyGrows.org.

Contact: Click here to contact me. You can email me questions, concerns, ideas, or suggestions. I am here for you to make this website as supportive as possible to your needs as a teaching professional.

I hope to co-construct this website with your help and expertise. Please let me know what works or what I could add to make it more beneficial to you as an educator. I am excited to work with you to create a new way for teaching professionals to collaborate while also creating a community of practice that supports you on your journey as an educator.

Appendix C

"How are you Supported" Questionnaire

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=====================================
=====================================
How are you supported?
=====================================
=====================================
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=============================================
 Page One
=============================================
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Thank you for taking the time to complete this short questionnaire.
Your name, e-mail, or school will NOT be associated with your
responses. There are only 15 questions. Please be honest in your
responses. The more I can learn about how you can be better
supported as an educator, the more I can customize a website to meet
your current needs.

This questionnaire seeks to learn more about how you feel supported
or how you could be more supported as an educator. For the purposes
of this questionnaire, support means: how others interact with you
so that your needs and interests are met. Specifically, what
assistance do you feel is in place that advocates for you as an
education professional?

Again, thank you for your time and cooperation,

Susan Hart

University of Kentucky

Department of Curriculum and Instruction

Doctoral Student

Please feel free to contact me if you have any questions or concerns
at: susanjhart@gmail.com

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1. What is your current position?
   ( ) Teacher
   ( ) Coach
   ( ) Other

2. What grade do you currently teach?

   _____

3. Years of teaching experience.

   _____

4. Years of coaching experience.

   _____

5. Have you held another position in education? If so, what and for how long?

   _____

6. Currently, how satisfied are you with your position?
   ( ) Very dissatisfied
   ( ) Somewhat dissatisfied
   ( ) Satisfied
   ( ) Extremely satisfied

7. In what ways are you currently supported as an education professional?

   _____
   _____
   _____
   _____
   _____

8. In what ways could you be more supported as an education professional?

   _____
   _____
   _____
   _____
   _____

9. What websites do you use for literacy support?

   _____
   _____
   _____

_____

_____

10. What are the top three ways you find support for your current position?

     First _____
     Second _____
     Third _____

11. How satisfied are you with the level of support for the following_____?

	Extremely Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Extremely Dissatisfied
Identifying struggling students	_____	_____	_____	_____
Assisting struggling students	_____	_____	_____	_____
Modeling strategy instruction	_____	_____	_____	_____
Selecting assessments	_____	_____	_____	_____
Administering assessments	_____	_____	_____	_____
Collecting and summarizing data	_____	_____	_____	_____
Obtaining instructional materials	_____	_____	_____	_____
Implementing new instructional materials	_____	_____	_____	_____
Professional Development	_____	_____	_____	_____
Innovative teaching strategies	_____	_____	_____	_____
Access to materials	_____	_____	_____	_____

12. (Only answer if you are a teacher)

How often do you interact with your Reading Coach?
     ( ) Once a day
     ( ) 2-3 times per week
     ( ) Once a week
     ( ) Every 2 weeks
     ( ) Not often
     ( ) Do not have a Reading/Literacy Coach

13. Check the top 5 things that would support you most as an educator on a professional website that focused on literacy.
     ( ) Live chats with other educators about literacy practices
     ( ) Live webinars with special presenters focused on literacy
     ( ) Access to educational articles

( ) RSS feed
( ) Links to other helpful educational websites
( ) Lesson plan ideas integrating language arts
( ) Pictures of classroom ideas (word walls, literacy centers, etc...)
( ) Helpful strategy instruction ideas
( ) Printable materials
( ) Children's book ideas/Reading Lists
( ) Suggested professional books
( ) Short helpful literacy video clips
( ) Educational/Literacy blog
( ) Place to upload your own literacy idea videos
( ) Other

14. What tools could an educational website provide that would help you grow as a professional?

_____
_____
_____
_____
_____

15. Is there anything else you would like to let me know about how you could be better supported as a professional educator?

_____
_____
_____
_____
_____

===
 Thank You!
===

Thank you for taking this questionnaire. Your response is very important to me.

Appendix D

Open-ended Initial Interview Protocol

1. Tell me about your background in education?
2. Tell me about your current professional development experiences?
3. How to you perceive your current professional development?
4. How are you supported as a literacy professional?
5. In what ways could you be more supported as a literacy professional?
6. In what ways do you use technology within your classroom?
7. In what ways do you use technology within your life?
8. What educational websites do you visit as a teacher to find support?
9. In what other ways would you like to be supported as a literacy teaching professional?
10. Is there anything else you would like to tell me about your experiences with professional development or anything related to your perceived support as a teaching professional?

Appendix E

Focus Group Interview Protocol

1. Tell me about your experiences so far as it relates to LiteracyGrows.org.

2. Describe your initial feelings of using an online platform such as LiteracyGrows.org.

3. In what ways is LiteracyGrows.org meeting your needs?

4. In what ways could LiteracyGrows.org better meet your needs?

5. What online components do you feel are most supportive to you as a literacy professional? Why?

6. What online components do you feel are lease supportive to you as a literacy professional? Why?

7. How could the intervention of LiteracyGrows.org be modified at this stage in your usage?

8. What do you find most appealing about LiteracyGrows.org? Why?

9. What do you find the least appealing about LiteracyGrows.org? Why?

10. How often would each of you say you spend on LiteracyGrows.org per day? Per week?

11. Could this number increase? How could we adjust the website to better meet your needs?

12. What else would you like me to know about your involvement or lack thereof with LiteracyGrows.org?

Appendix F

Exit Interview Protocol

1. How did LiteracyGrows.org compare to your average professional development experiences?
2. What was the most effective online component of LiteracyGrows.org?
3. What was the least effective online component of LiteracyGrows.org?
4. How was LiteracyGrows.org efficient?
5. How was LiteracyGrows.org not efficient?
6. Was LiteracyGrows.org appealing to you as a possible model of professional development? Why or why not?
7. What factors positively influenced your participation with LiteracyGrows.org?
8. What factors negatively influenced your participation with LiteracyGrows.org?
9. How has your use of technology changed over the last four months?
10. Were you able to come to any new understandings about yourself as a teaching professional? Why or why not?
11. Is there anything else you would like to tell me about your experiences with LiteracyGrows.org over the past four months?

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ACADEMIC BACKGROUND

<u>University of Kentucky</u>

Ed.D.   Curriculum and Administration
             Specialization: Literacy
             Degree conferred: May 2012

             Dissertation: *LiteracyGrows.org Cultivating Teaching Professionals: A Formative Experiment Exploring the Effectiveness, Efficiency, and Appeal of a Co-constructed Online Platform for Professional Development*

             Committee: Janice F. Almasi, Ph.D. (Advisor), Mary Shake Ph.D., Susan Cantrell, Ph.D., Laurie Henry, Ph.D., Alan DeSantis, Ph.D.

M.A.   Elementary Education K-5
             Endorsement: Reading and Writing K-12
             Degree conferred May 2005

<u>Wittenberg University</u>

B.A.   Major: Early Childhood Education pk-3; Minor: Political Science,
             Degree conferred May 2004

PROFESSIONAL WORK EXPERIENCE

August 2011-Present   **Literacy and Technology Teacher**
                           Cassidy Elementary School
                           Fayette County Public Schools

August 2007-August 2011   **Research Assistant**
                           Janice F. Almasi, Ph.D.
                           Department of Curriculum and Instruction
                           University of Kentucky

August 2010-August 2011   **Instructor**
                           EDC 339: Designing a Reading Language Arts Program for the Elementary School
                           University of Kentucky

June 2010-August 2011	**Research Assistant** Kristen H. Perry, Ph.D. Department of Curriculum and Instruction University of Kentucky
August 2008-May 2009	**Instructor** EDC 329: Teaching Language Arts University of Kentucky
August 2005-June 2007	**District of Columbia Public Schools** Elementary School Instructor Langdon Elementary School: Kindergarten
June 2006-August 2006	**District of Columbia Public Schools** Summer School Instructor Langdon Elementary School: First Grade, Second Grade
January 2005-July 2005	**Research Assistant** Janice F. Almasi, Ph.D. Department of Curriculum and Instruction University of Kentucky
September 2004-April 2005	**University of Kentucky Literacy Clinic** Clinician: Fourth Grade
June 2003-August 2003	**Congressional Intern** Education and Workforce Committee

PUBLICATIONS

Book Chapters:

Almasi, J. F., & **Hart, S. J.** (in press). Best practices in comprehension. To appear in L. M. Morrow & L. B. Gambrell (Eds.), *Best practices in literacy instruction* (4th ed.). New York: Guilford Publications.

Almasi, J. F., Palmer, B. M., Madden, A., & **Hart, S. J.** (2011). Interventions to enhance Narrative comprehension. In R. Allington & A. McGill-Franzen (Eds.), *Handbook of reading disability research* (pp. 329-344). New York: Routledge.

Articles:

Hart, S. J. (in review). Review of Research Methods Regarding Online Communities of Practice. *Review of Educational Research*

Non-refereed Research Reports:

Almasi, J. F., **Hart, S. J.,** Costanzo, Z., Crout, M., Frank, S. T., Grow, L., Montgomery,
S. & Worley, K. (2008, August). *An evaluation of the impact of the Kentucky
Reading Project on teacher and student growth 2007-2008.* Lexington, KY:
Collaborative Center For Literacy Development

REFEREED CONFERENCE PRESENTATIONS

National:

Hart, S. J. (2011, December). *Formative Experiment: Co-construction of an online
community of practice for literacy educators.* Paper presented at the 61st annual
meeting of the Literacy Research Association. Jacksonville, FL.

Perry, K. H., & **Hart, S. J.** (2010, December). *Literacy and adult ESL programs for
refugees: How prepared are tutors and instructors.* Paper presented at the 60th
annual meeting of the Literacy Research Association (formerly the National
Reading Conference). Fort Worth, TX.

Hart, S. J. (2009, December). *Context, Community, and Collaboration: Exploring how
literacy coaches and teachers negotiate power.* Paper presented at the 59th annual
meeting of the National Reading Conference. Albuquerque, NM.

Hart, S. J. (2008, December). *Synthesizing the research related to struggling readers:
Reflection, collaboration, and strategic intervention as agents of change.* Paper
presented at the 58th annual meeting of the National Reading Conference. Orlando,
FL.

Almasi, J. F., Palmer, B. M., Madden, A., & **Hart, S. J.** (2008, December). *A research
synthesis of interventions to enhance struggling readers' comprehension of
narrative text.* Paper presented at the 58th annual meeting of the National Reading
Conference. Orlando, FL.

State and Regional:

Hart, S. J. (2010, October). *Professional development versus professional
empowerment: A pilot study related to perceptions of literacy support as it relates
to literacy development.* Paper to be presented at the annual Kentucky Reading
Association Conference. Lexington, KY.

EXTERNAL FUNDING ACTIVITIES: ($31,200 Total Funded Projects)

* Funding Source: International Reading Association: Helen M. Robinson Grant
  Project: Dissertation Research: *A Formative Experiment Investigating the
                    Creation and Usability of an Online Professional Community of
                    Practice: LiteracyGrows.org Cultivating a Community of Literacy
                    Professionals*

Role: Principal Investigator of Research
Applied: January 2010
Award Dates: May 2010—May 2011
Grant Amount: $1,200
Status: **FUNDED**

* Funding Source: Fayette County Public Schools
  Project: 21st Century Learning Center
  Role: Principal Investigator of Research
  Applied: December 2011
  Award Dates: December 2011-December 2012
  Grant Amount: $30,000
  Status: **FUNDED**

PROFESSIONAL ACTIVITIES:

Professional Organization Memberships and Committee Work:

International:
    International Reading Association:
    • Technology Committee 2010-present
National:
    Literacy Research Association (formerly the National Reading Conference)
State:
    Kentucky Reading Association
    • Secretary of the Bluegrass Council, 2009-2010

Awards, Honors, and Appointments
    • Pi Lambda Theta Honor Society
    • Golden Key International Honour Society
    • Delta Epsilon Iota Honor Society
    • Phi Delta Kappa Honor Society
    • Outstanding Pre-service Teacher Award, May 2004
    • Dean's List Wittenberg University
    • Vice-President Membership Delta Gamma Sorority

Community Service
    • Big Brothers Big Sisters Volunteer
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