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The significance of administrative support for the state-wide innovation of Montana's Indian education for all

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THE SIGNIFICANCE OF ADMINISTRATIVE SUPPORT FOR THE STATE-WIDE INNOVATION OF MONTANA'S INDIAN EDUCATION FOR ALL

By

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The Significance of Administrative Support for the State-Wide Innovation of Montana's Indian Education for All

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This non-experimental dominant-less dominant mixed-methods study examined data specific to principal and teacher perceptions of the leadership support for Indian Education for All (IEFA) professional development in their school. The data from each instrument were compared to (a) the administrators' and teachers' Peak Stage of Concern of the Indian Education for All innovation, (b) the highest IEFA training level attained, and (c) the amount of time that administrators and teachers report spending on supporting and implementing IEFA in their school and classroom. Spearman's *rho* correlations were utilized to examine these relationships.

This study examined if the level of leadership support, or the level of training received by teachers, had the stronger relationship to the teacher's highest stage of concern. Additionally, this study examined which factor - the level of leadership support, or the level of training received by teachers - had a stronger relationship on the amount of time spent on implementing the Indian Education for All innovation in the classroom.

Leadership support was defined by the *Standards for Professional Learning* (Learning Forward, 2011), and measured by the Self-Assessment Inventory 2 (SAI2). The Peak Stage of Concern is identified by scores on the Stages of Concern Questionnaire (SoCQ) and is useful in determining a teacher's "readiness" for implementation of a new program in their classroom (George, et al., 2008). The levels of IEFA training were defined by the Montana Office of Public Instruction's three-tiered training model.

Statistically significant relationships were found between the Highest Level of IEFA Training completed by the teacher to that of two other variables (a) the teacher's Peak Stage of Concern, and (b) the actual amount of time the teacher implements IEFA in the classroom. The data from this study revealed a clear indication that the highest level of IEFA training the principal participated in had a positive and statistically significant relationship to the teacher's highest level of IEFA training. This study found that it is the level of IEFA training completed by the teacher that has the stronger relationship to both the teacher's stages of concern and their classroom implementation of the mandated initiative.

Acknowledgments and Dedications

The accomplishment of any major life goal is never done in complete isolation. No matter what the task was, there are always a number of people that modeled, supported, and advocated for the cause. This is definitely true in my case, as I look to complete this doctoral program. It was truly a combination of my own sweat, tears, and loss of sleep. However, there was also vision, encouragement, patience, and even divine intervention from outside sources that brought this doctorate to fruition. Though I don't have room to name everyone here, I thank you for your support.

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I dedicate this dissertation and this program to my beautiful children – Hannah, Maggie, Veronica, and Max. I hope that all of you will someday strive to always learn more and will someday consider making a doctorate one of your life goals, no matter what career field you choose. If I can do it, each one of you can do it too. You are the motivation to do what I do, and I love you all dearly.

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Chapter One – Introduction to the Study

Professional development, sometimes referred to as staff development, for new programs within schools requires much time and money. The importance of having a professional development plan in order to improve the implementation efforts of new programs has been recognized by the National Staff Development Council (NSDC); as of 2011, Learning Forward. The NSDC Standards recognize that sustained, intellectually rigorous staff development is essential for everyone who affects student learning (NSDC, 2001). Sparks and Hirsh (1997) stated that: "Staff Development is at the center of all education reform strategies" (p. 96). However, this recognition is often lost during the final implementation plans. "In the past, staff development has too often been an afterthought as school systems initiated major innovations" (Sparks & Hirsh, p. 96).

Fullan (2001) explained that professional development efforts have "failed to penetrate the classroom door" (p. 57). Furthermore, Guskey (2002) described professional development efforts as popular, yet largely unsuccessful. Therefore, despite increased professional development efforts of educational leaders, planned follow through and support is often lacking, to the point that implementation efforts fall short. The observations made by Hirsh (2003), Fullan and Guskey illustrate a serious issue in education. The time, money, and effort that educational leaders dedicate to the onset of staff development initiatives for their schools often outweighs the actual implementation efforts of teachers in the classroom.

Necessarily, school administrators ask such questions as "What strategies should I use in planning for my school's professional development initiatives, so that my teaching staff will be comfortable with implementing the new skills they have learned?" and "How will I know

whether the staff development properly prepared the teachers for immediate use in the classroom?" and "If not immediately, what do we need to address to get them there?"

School administrators do have research to support their planning and evaluation of staff development initiatives (Church, Bland, & Church, 2010; Guskey, 2000; Joyce & Calhoun, 2010; Learning Forward, 2011; NSDC, 2001; Porter et al., 2000; Richardson, 2003;). The NSDC worked for more than two decades, identifying the characteristics of professional development efforts of educators and determining which of these have the greatest positive impact on classroom implementation. The characteristics that were commonly evident in those cases studied became the foundation of the NSDC (2001) Standards for Staff Development. These standards were the foundation of high-quality professional development for a decade. Then, in 2011, the NSDC changed its name to Learning Forward, and released a revised set of standards (Appendix A).

The NSDC Standards represented a framework of factors that school administrators could address, including their own leadership efforts, while planning for, initiating, and evaluating staff development in their schools. In 2004, the NSDC and the Southwest Educational Development Laboratories (SEDL) developed a survey tool known as the Standards Assessment Inventory (SAI) as a means to measure the degree to which a school's professional development program aligns to the standards for quality professional development. Along with the revision of these standards in 2011, the related survey tool was also updated.

The Concerns Based Adoption Model (CBAM) is another contribution to the research pertaining to staff development that administrators can use to focus on the varying concerns staff members have about a new innovation and determine how this impacts their ability to implement new skills. The CBAM has been used for nearly four decades and identifies an individual's

concerns along a continuum known as the Stages of Concern (SoC) for the innovation. The survey is known as the Stages of Concern Questionnaire (SoCQ) and the resulting score informs administrators about what particular concerns individuals or groups of individuals have regarding a staff development initiative. According to Horsley and Loucks-Horsley (1998), the information regarding the current stages of concern that staff members have at any point of time within an implementation process is useful in planning for staff development next steps and follow-up training.

The CBAM is designed to focus on a specific staff development innovation, to inform the level at which a staff or individual is ready to implement the innovation in the classroom (George et al., 2008). The Standards Assessment Inventory can be used to evaluate a school's staff development efforts in a general sense, but can also be looked at through the lens of a specific initiative. While it is important to evaluate staff development efforts in general, it is more useful to set such evaluations within the context of the specific innovation. Educational innovations like science inquiry, differentiation, or writing/reading across the content area all present varying implementation challenges and each could result in different survey outcomes depending on teacher backgrounds. This research focused on one educational innovation in Montana that had wide-spread implementation, expectation, and support efforts the Montana Indian Education for All initiative.

Between 2007 and 2012, Montana school districts received just over $28 million to implement the Indian Education for All mandates for staff development and classroom implementation (Montana OPI, personal communications, January 24, 2012). The Indian Education for All law is a constitutional mandate that is funded by the state legislature. MCA 20-10-501 requires every teacher in the state of Montana to infuse Montana Indian cultures into

their classroom curricula. In 2005, the Montana Office of Public Instruction (OPI) initiated a state-wide resources development plan, and a coinciding professional development plan. This plan led to the development of the state's *Indian Education for All Model Lessons*, and the professional development plan became known as the *Indian Education for All Roll-Out* training model.

According to records of the Montana North Central Educational Service Region (MNCESR), this state-wide roll-out of Indian Education for All professional development became a major focus of the two original Montana Regional Education Service Agencies (RESAs). Co-development between the state and the two original RESAs eventually led to a three-tiered training model (see Table 2 in Chapter Two, p. 61) that would become the mainstay of the Montana Office of Public Instruction's ongoing roll-out models.

According to the reports required of these regional service agencies, one of the major goals mandated by the state of Montana was: "by January 2008, 100% of the region's teachers and administrators [will] be trained in Level 1 Indian Education for All" (MNCESR, 2008, p. 9). A review of the Level 1 Indian Education for All evaluation tool (2008) shows that the focus was on satisfaction of the training itself, with little attention paid to the participants' concerns and readiness to implement the new materials (Farriar, M. personal communication May, 2008). A few improvements were made in revised versions of the tool, but the evaluations of the state-wide Indian Education for All trainings and the three-tiered model still lacked specific implementation data to help administrators make informed decisions.

Problem Statement

The problem is that the time, money, and efforts invested by schools towards professional learning is often wasted and don't always result in improved classroom practices. With all the time and money spent in education on professional development, one would think that implementation of programs were successful the majority of the time. However, experience suggests otherwise, and has left "a landscape littered with failed approaches" (Lieberman & Wood, 2001, p. 174). With all of the varying factors that impact staff development initiatives, it is important that principals know whether their leadership and support has a direct relationship on preparing teachers to implement educational initiatives in the classroom. It is also important to know what specific concerns the teaching staff have about the initiative, in order to know what the next steps should be for follow-up professional development and support. Principals and staff who do not have this information risk wasting time and money; most important, they also risk having important educational initiatives wane because of the lack of proper supports.

Purpose of the study

This study's purpose was to examine data specific to principal and teacher perceptions of the leadership support for Indian Education for All professional development in their school, as measured by the Leadership Subscale of the Standards Assessment Inventory 2 (SAI2). These data were compared to: (a) principals' and teachers' highest stage of concern of the Indian Education for All innovation as measured by the Stages of Concern Questionnaire (SoCQ) from the Concerns Based Adoption Model; (b) the highest training level attained, as identified by the Montana OPI three-tiered training framework; and (c) the amount of time that principals and teachers reported spending on supporting and implementing Indian Education for All in their school and classroom. This study identified relationships among the professional learning

leadership support scores and the Peak Stage of Concern reported, the highest level of training completed, and the estimated amount of time of program implementation in the classroom.

In addition, this study examined if the level of leadership support, or the level of training received by teachers, has the strongest relationship to the highest stage of concern. Finally, this study identified which factor has a stronger relationship on the amount of time spent on implementing the Indian Education for All innovation in the classroom - the level of leadership support, or the level of training received by teachers.

Research Questions

This study utilized one overarching question to guide the research in identifying the relationships between the principals' levels of leadership in supporting Indian Education for All professional development and the outcomes that are representative of teachers' implementation. The overarching research question is:

#1 – What is the relationship between a principal's support for professional development and the teacher's implementation of a mandated state-wide innovation?

The answer to this first research question was further informed by the answers to the research questions two thru five. Data from eleven hypotheses, as noted in Chapter Three, informed these research questions. Research questions two through five are:

#2 - Which variable has the stronger relationship to the teacher's Peak Stage of Concern about the Indian Education for All innovation, the NSDC Leadership Subscale score, or the highest level of Indian Education for All training completed by the teacher?

#3 - Which variable has the stronger relationship to the teacher's amount of time spent implementing Indian Education for All, the NSDC Leadership Subscale Score or the highest level of Indian Education for All training completed by the teacher?

#4 - Which variable has the stronger relationship to the teachers' Peak Stage of Concern about the Indian Education for All innovation, the principal's Peak Stage of Concern about the Indian Education for All innovation or the highest level of Indian Education for All training completed by the principal?

#5 - Which variable has the stronger relationship to the teachers' amount of time spent implementing Indian Education for All in the classroom, the principal's Peak Stage of Concern about the Indian Education for All innovation or the highest level of Indian Education for All training completed by the principal?

Definition of Terms

For the purposes of this study, the following definitions are used:

Communication Networks. "The geographical regions, communities, or social groups where some people are more closely connected to others" of similar proximity or interest (Hall & Hord, 2011, p. 214). "The adoption of innovations occurs along the lines of communications" (Hall & Hord, 2011, p. 213).

Concern. "The composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task…. The mental activity composed of questioning, analyzing, and re-analyzing, and considering alternative actions and reaction, and anticipating consequences in *concern*" (Hall, George, & Rutherford, 1979, p. 5).

Concerns Based Adoption Model (CBAM). CBAM is an established change perspective that was first introduced by Hall, Wallace, and Dossett in 1973. "The CBAM perspective begins with emphasizing the importance of understanding and addressing the personal side of change….Understanding and addressing these differences are important to overall implementation success" (Hall & Hord, 2011, p. 265). The CBAM consists of three diagnostic

tools [Stages of Concern, Levels of Use, and Innovation Configurations] which "can be used to account for and address individual differences" (Hall & Hord, 2011, p. 266).

Critical Mass. "The certain point in the adoption process, where the activity and the rate of adoption are sufficient enough to become self sustaining (Hall & Hord, 2011, p. 223).

Diffusion theory. A model used to describe how an innovation permeates a society. Diffusion of an innovation occurs in the following stages: innovators, early adopters, early majority, late majority, and laggards (Rogers, 2003).

Early adopters. These are individuals who, after innovators, are next to adopt an innovation. They account for roughly 13.5% of the population. Early adopters tend to help speed the diffusion process and tend to be early leaders. These individuals tend to serve as role models for early and late majority members (Rogers, 2003).

Early majority. Members of this group account for roughly 34% of the population. They are described as adopting "new ideas just before the average member of a system" (Rogers, 2003, p. 283). These individuals may evaluate an innovation for some time before deciding to adopt (Rogers, 2003).

Implementation Bridges. "The research-based constructs and tools that can be used to facilitate individuals and organizations in moving across the gap between current practice and changes in practice" (Hall & Hord, 2011, p 11).

Indian Education for All. Montana Code Annotated (MCA) 20-1-501 states:

> Recognition of American Indian cultural heritage -- legislative intent. (1) It is the constitutionally declared policy of this state to recognize the distinct and unique cultural heritage of American Indians and to be committed in its educational goals to the preservation of their cultural heritage. (2) It is the intent of the legislature that in

> accordance with Article X, section 1(2), of the Montana constitution: (1) every Montanan, whether Indian or non-Indian, be encouraged to learn about the distinct and unique heritage of American Indians in a culturally responsive manner; and (2) every educational agency and all educational personnel will work cooperatively with Montana tribes or those tribes that are in close proximity, when providing instruction or when implementing an educational goal or adopting a rule related to the education of each Montana citizen, to include information specific to the cultural heritage and contemporary contributions of American Indians, with particular emphasis on Montana Indian tribal groups and governments. (3) It is also the intent of this part, predicated on the belief that all school personnel should have an understanding and awareness of Indian tribes to help them relate effectively with Indian students and parents, that educational personnel provide means by which school personnel will gain an understanding of and appreciation for the American Indian people.
>
> (http://www.opi.mt.gov/pdf/indianed/resources/ArticleX_Indian Education for All.pdf)

Innovation. "The generic name given to the object or situation that is the focus of the [adoption]… it may be a new strategy, program, or practice, or it may be something that has been in use for some time" (George et al., 2008, p. 7).

Innovators. "Venturesome" individuals have a "desire for the rash, the daring, and the risky" (Rogers, 2003, p. 283). These individuals are the first to adopt an innovation and account for approximately 2.5% of the population (Rogers, 2003).

Laggards. These individuals are the last to adopt an innovation, and, in many cases, never choose to accept an innovation or new idea. They account for approximately 16% of the

population and rely on tradition to motivate their decision-making process. They tend to harbor suspicions both about innovations and about change agents (Rogers, 2003).

Late majority. Members of this group tend to adopt an innovation "just after the average member of a system" (Rogers, 2003, p. 284). These individuals account for 34% of the population and often decide to adopt an innovation as a result of necessity and/or peer-pressure (Rogers, 2003).

Montana Three-Tiered Professional Development Model. The Montana OPI developed a three-tiered professional development plan in response to Indian Education for All (2005-2008), as a model for districts and schools. This model continues to be replicated in various curricular roll-outs from the state such as the state-wide Science Inquiry innovation (2008-2009), the Information Literacy and Library Media Standards (2009-2010), and the Common Core State Standards (2012-2014) professional development plan. (MNCESR)

National Staff Development Council's Standards for Staff Development (revised) – "A set of major standards for staff development based on the research models for the Content, Process, and Context that provide the framework for a new vision of effective and high quality professional development" (NSDC, 2001).

Peak Stage of Concern. The identified stage of an individual's Stages of Concern Questionnaire (SoCQ) with the highest score. This stage indicates the individual's most intense concerns about the innovation at the time of the survey (Hall et al., 1979). "At any given time, teachers may have concerns at several levels but … they tend to concentrate in one particular area" (Hall & Hord, 2011, p. 70).

Standards Assessment Inventory (SAI). A survey tool that: "provides schools, school systems, state, provincial, and other education agencies data about the effectiveness and quality

of their professional development program by examining the degree to which it aligns with Standards for Staff Development and Learning Forward's definition of quality staff development" (NSDC, 2004, para. 1).

Staff Development – "The means by which educators acquire or enhance the knowledge, skills, attitudes, and beliefs necessary to create high levels of learning for all students." (NSDC, 2001, p. 2).

Stages of Concern (SoC). The Stages of Concern is one of the three dimensions of the CBAM that focuses on how individual's "feelings and perceptions evolve as the change process unfolds" (Hall & Hord, 2011, p. 68).

Stages of Concern Questionnaire (SoCQ). The Stages of Concern about survey instrument, which consists of 35 Likert-scale questions and open-ended question regarding attitudes towards an innovation (Hall et al., 1979; Hall & Hord, 2011). "The SoCQ provides a way for researchers, program evaluators, administrators, and change facilitators to assess teacher concerns about strategies, programs, or materials introduced in a school" (George, Hall, & Stiegelbauer, 2008, p. xi).

Delimitations of the Study

This study was delimited to Montana principals of any of the kindergarten through sixth grades that have ten or more certified teaching staff, and who have the responsibility of planning for and providing follow-up support for professional development efforts within their school. This study was also delimited to Montana teachers of any of the kindergarten through sixth grades from a school with ten or more certified teaching staff that have the responsibility for the implementation of Indian Education for All in their classrooms.

Limitations of the Study

Outside factors may impact any study and there may be no controls or means to mitigate them. There are many variables that effect staff development efforts, whether on a large scale such as state or district initiatives, or on a smaller scale, such as the classroom teacher's interests or time available to attend workshops. These extraneous variables must be identified and when possible, mitigated. There are two limitations for this study.

The first limitation that might influence Indian Education for All implementation is a school's frequency and type of professional development available to teachers. Not all schools or districts provide equal levels of support for teachers to attend workshops or professional conferences. Variations may exist in additional support that some districts can afford to implement, such as instructional coaches, while other districts might only support the initial professional development. Other variables include whether a teacher has access to professional development online or through various educational service agencies.

Another limitation of Indian Education for All implementation is the varying levels of exposure to the Montana three-tiered professional development model. As a result of the 2005 legislative dollars designated towards state-wide Indian Education for All implementation, the Montana OPI developed a three-tiered professional development model for educational service regions, districts, and schools. This model presents a potential limitation because of the variations in support of this model by districts and schools. Variations may exist between districts that have adopted the three-tiered model to plan and implement formal training through an ongoing basis, while other districts might not have knowledge of the tiered plan. This model could also be a limitation because not all regions of the state had it available for use at the same time; only two educational service regions, MNCESR and the Western Montana Professional

Education Region (WMPER), were active as early as 2005, while the three other regions became active after 2007.

Significance of the study

Much time and money has been invested in professional development activities that are geared towards improving student learning, without a clear understanding of the components and time necessary for successful implementation of a particular innovation (Hall & Hord, 1987). This study contributed to the understanding of the relationships between a principal's leadership support and teacher's concerns about classroom innovations.

This research also informed professional practice by identifying levels of administrative support necessary to directly impact the level of successful implementation of Montana's Indian Education for All mandates in the classroom. Because Indian Education for All is a constitutional mandate, the state of Montana is attempting to measure the level of implementation at the district and classroom levels. Therefore, valid and reliable data are needed to inform policy makers and administrators as to the current Montana teachers' concerns about the Indian Education for All innovation, so that appropriate next steps can be taken.

Finally, a search of the literature indicated that there have been no research studies that have combined the components of the NSDC's Self-Assessment Inventory with that of the Stages of Concern. Dr. Shirley Hord, Scholar Emerita with SEDL, a researcher of both models, said she was unaware of any study that combined data collected from both models (S.M. Hord, personal communications, August 3, 2011). This study contributed to understanding how combining aspects of both models can assist professional development planners, administrators, and policymakers. It also contributed to the growing body of literature regarding the Montana Indian Education for All state initiative and will help inform school administrators, the regional

service agencies, and the policymakers at the Montana OPI about current needs and next steps for staff development.

Summary

Chapter One provided an overview to the study that focused on staff development in an education setting. This chapter contained an introduction to this study, background information, the statement of the problem, the purpose of the study, the study's research questions, definitions of important terms, the limitations, and the significance of the study.

This study utilized the *Leadership* component of Learning Forward's Standards for Professional Learning (2011), and the *Stages of Concern* component of the Concerns Based Adoption Model (1979). These two components were considered within the context of the Montana Indian Education for All initiative.

Chapter One described that the problem with many staff development efforts in the education profession is that most efforts fail to impact what happens in the classroom. The chapter introduces the importance for administrators to know if their support has a direct impact on preparing teachers to implement new innovations in the classroom. Also of importance identified in this chapter is the need for administrators to be able to gauge their staff members' concerns towards any particular innovation being implemented in their school.

The purpose of the study was to identify relationships between the level of a principal's support towards a particular innovation and the teacher's reported concerns, highest levels of training completed, and the estimated time the innovative program is implemented in the classroom. In addition, this study examined whether the level of a principal's support, or the levels of training a teacher has participated in, has the stronger relationship on that teacher's current level of concern about that innovation. The final purpose was to examine if the teacher's

highest level of training or the principal's leadership support has the stronger relationship to the amount of time a new innovation is implemented in the classroom.

One overarching research question provided the focus for this study's design. The question states: What is the relationship between a principal's support for professional development and the teacher's implementation of a mandated state-wide innovation? This research question was informed by four additional research questions.

This study sought to inform principals about the impact of their leadership on the implementation of new classroom innovations. The importance of this study is that it could help inform professional practice by identifying levels of administrative support needed to impact the implementation of Montana's Indian Education for All innovation. In Chapter Two, the design of this study is informed by the literature pertaining to the body of research regarding professional development, the adoption of new innovations, and the principles of change.

Chapter Two - The Review of the Literature

This review examines the scholarly development of the major components of the study. First, it reviews the historical development of the National Staff Development Council's (NSDC) Standards for Staff Development (2001), and the organization's transition to Learning Forward and the third edition of the standards known as the Standards for Professional Learning (2011). The review explains how the standards historically defined high quality staff development, and the reasons for the ongoing revisions. This review also looks at how other studies have utilized the standards for measuring staff development efforts in order to place the NSDC standards within the general body of the literature.

The Stages of Concern (SoC) regarding any innovation is another major component of the study. The literature review describes the development and evolution of the SoC, and how it is used as a tool to measure an educator's level of concern about new, innovative programs that they are engaging in through staff development. The review also explores how the interpretation of the SoC signifies the educator's level of readiness to implement the new program in the classroom. The factors and processes that influence how new innovations permeate into the classroom are examined through the perspectives of the *Diffusion Theory* (Rogers, 2003) and the *Concerns Based Adoption Model* (Hall & Hord, 1981) within the greater context of change theories.

The context of this study is set within the Montana Indian Education for All innovation. The historical background of the development of the Montana Indian Education for All mandates is examined as well as some of the challenges to implementation efforts that have existed. The implementation support efforts of the Montana Office of Public Instruction (OPI) are also explored, including the development of the Montana Regional Service Agencies (RESAs), along

with the three-tiered training model to support state-wide efforts of implementation. The historical development of staff development standards is examined.

Standards for Professional Learning

The National Staff Development Council (NSDC) developed a model by which to evaluate professional staff development within the educational setting based on a set of standards. The NSDC Standards for Professional Development have been included in multiple studies since its original publication in 1995. Districts and schools that utilize these standards participate in an organized, systematic approach, which is a paradigm shift from the traditional approach of viewing staff development as isolated events. According to Mizell (2001), these standards: "provide the vision and framework for making staff development more responsive to the learning needs of educators and students" (p. vi).

The National Staff Development Council (NSDC) was formed in the 1970's with the goal to ensure student success through high quality professional practices in school improvement models. As a result of the national standards movement in the late 1980's, the NSDC began work in the early 1990's to identify the components of high quality professional development. NSDC worked in collaboration with ten other educational organizations such as the U.S. Department of Education, The National Education Association (NEA), and the Association of Supervision and Curriculum Development (ASCD). These organizations collaborated to identify the components of high quality staff development, which were first published by the NSDC in 1995. Mizell (2001) stated: "the standards start from the premise that the primary purpose of staff development should be to help educators develop the insights, knowledge, and skills they need to become effective classroom and school leaders" (p. vi).

The NSDC Standards for Professional Development, now known as the Standards for Professional Learning by Learning Forward (2011), have evolved, going through two revisions based on extensive research and development. Now in its third edition, the seven standards [Appendix A] stand as a solid model for what was once referred to as *High Quality Professional Development*, and are now used to support a high level of quality needed for professional learning (Learning Forward, 2011, p. 20). "The standards make explicit that the purpose of professional learning is for educators to develop the knowledge, skills, practices, and dispositions they need to help students perform at higher levels" (Learning Forward, 2011, p. 14). As educator accountability continues to increase, the Learning Forward (2011) Standards for Professional Learning provides a four-stage cycle in order to connect professional development to student results.

Other studies that have used the NSDC Standards

A search of the literature for the inclusion of the *National Staff Development Council's Standards* returned more than 1400 dissertations and more than 350 scholarly journals (http://search.proquest.com). The literature review was narrowed down to five studies that met four inclusion factors: a) focused on the NSDC's standards for high-quality professional development; b) utilized the NSDC's Self-Assessment Inventory (SAI); c) surveyed teachers as to their perceptions of effective professional development practices; and d) surveyed school administrators as to their perceptions of effective professional development practices.

The principal's role in promoting standards-based professional development.

Presler (2006) investigated the principal's role in promoting standards-based professional development. This mixed-method national study utilized a Likert-type questionnaire that Presler developed in collaboration with two other researchers. The purpose of the study was to describe the principals' and the staff's levels of knowledge of the NSDC Standards, as compared to the perceptions that both the principals and teachers have regarding whether effective leadership had been provided for professional development, and if successful implementation had been achieved in their schools.

Presler (2006) was guided by three research questions: (a) How did principals perceive their own behaviors and activities relative to the best practices of professional development? (b) How did teachers perceive administrators behavior and actions relative to professional development? (c) To what extent did principals base their professional development activities and practices within their schools on the NSDC standards?

Presler's (2006) research methodology used a mixed method design in which the results from the questionnaires were examined using descriptive statistics and the measure of central tendency. This study collected information on how school principals promoted and supported professional development in their schools, and determined the principal's perception of professional development practices in their schools. Presler's (2006) data were collected through surveys and self-report instruments, and the data were qualitatively analyzed for themes or patterns which emerged as related to the NSDC's standards.

The study found that principals did perceive themselves as providing effective professional development even though they did not have a high knowledge level or implementation related to the NSDC's Standards. Presler noted that "although proactive

administrators should anticipate and plan for professional development, principles may not have the complete knowledge they need to engage their staff in professional development" (p. 13). According to Presler (2006), teachers' and principals' responses indicated that the professional development being practiced in their schools were not always based on the NSDC standards.

The study also found that there were differences between the principals' and teacher leaders' perceptions as to the effective implementation of programs as a result of staff development efforts. Presler (2006) stated: "teachers' perception of administrative behavior in professional development was sometimes different than that of the administrator" (p. 119). Regarding the question of how teachers perceived administrators' behavior, Presler explained that teachers did not always agree with principals who were surveyed on the same questions. "Teachers' perceptions of the principals' performance on the questions related to the NSDC (2001) … were sometimes at variance with principals' perceptions" (pp. 125-126).

Presler's study illustrated the teacher's and principal's knowledge of the components of the NSDC Standards in relationship to their perceptions of program implementation. Presler (2006) found that "principals surveyed did not always show they consistently understood or practiced these research based practices" (p. 123). Presler's findings supported change issues that Sparks (2002), Sergiovanni (1994), and Joyce and Showers (1995) found in education systems where change efforts had failed because of a leader's lack of understanding.

Presler also found that it is questionable whether or not professional development is a continuous process that is aligned to school goals. "This research makes it clear that effective professional development needs the facilitating role of a present, involved principal who understands the research behind the NSDC standards" (Presler, 2006, p. 132). Presler (2006) concluded that "the knowledge base of teachers and principals on research based professional

development is not as extensive as previously thought" (p. 134). The perceptions of what it takes to lead an effective professional development program "often do not rely on research based practices" (Presler, 2006, p. 134).

Perspectives of teachers, school administrators and central office administrators.

Ferguson's (2008) purpose was to gain an in-depth understanding of the perspectives of elementary teachers, elementary school administrators, and central office administrators about professional development. His study extended the research done earlier by Ali (2004), Guskey (1995), Murphy (2000), and Roth (2005), which examined the perspectives among different educator groups. Two research questions guided this dissertation: 1) How are the perceptions of this these three groups alike; and 2) How are the perceptions of these three groups different?

"This qualitative study used face-to-face interviews with elementary teachers, school administrators, and central office administrators to gain an understanding of their unique perspectives toward professional development" (Ferguson, 2008, p. 10). As a result, Ferguson developed two lists regarding these subgroups' perceptions of professional development practices; the first list recorded perceptions of effective practices, and the second identified ineffective practices.

According to Ferguson (2008), elementary teachers' responses indicated that they wanted positive instructors who could empathize with the teacher, and they wanted them to be knowledgeable presenters with credible strategies. Elementary teachers also looked for opportunities to share and brainstorm with other teachers, rotate among small groups, and preferred presenters who used teaching techniques similar to those used in the classroom. Finally, elementary teachers like the opportunity to visit model schools for follow-up, and preferred long-term over short-term professional development.

Ferguson (2008) identified elementary school administrators' perceptions of effective professional development practices as the following: collaboration with other educators, small group instruction to provide opportunity for high engagement and to apply ideas, and the use of the Socratic method; Administrators preferred presenters who could connect with the target audience, and groups of instructors visiting their schools to provide additional on-site staff development; Finally, school administrators identified the need for enough time to develop strategies and to plan for implementation, and they preferred long-term professional development opportunities.

The effective professional development practices that central office administration identified in Ferguson (2008) were: utilizing trainers with expertise and personality, sending local central office personnel to train-the-trainer options; and arranging small group instruction with follow-up professional development sessions. Finally, school administrators preferred focusing on the entire system and linkage to a broader plan, supported by research-based strategies.

When participants were asked about ineffective professional development practices, Ferguson (2008) explained that "elementary teachers, school administrators, and central office administrators all agree on how ineffective a presenter is when they are poorly organized and use lecture as their primary means of presentation" (p. 77). Ferguson (2008) also identified that all three groups look at the personality of the presenter as playing a major role when concepts are presented, and all three groups identified that the overuse of computerized presentations was ineffective.

A final theme that commonly emerged from the responses of all three groups was the factor of time. Ferguson (2008) identified that the elementary teachers stressed that it was the

time-of-day that is most important for their staff development to be effective. According to Ferguson (2008), elementary teachers thought that all-day workshops the day before students arrive, as well as workshops that are done after the school day ends are not an effective professional development opportunity. The lack of time to process information during and after workshops was identified as ineffective by school administrators. Lastly, central office administrators identified the ability to sustain strategies over time as a major factor in determining the effectiveness of professional development.

Ferguson's (2008) findings are important to this study because they illustrate the perceptions of what teachers, school administrators, and central office administrators consider as effective and ineffective staff development practices. The study found several factors that were ranked as important to the success of professional development in schools and districts. According to Ferguson (2008), the significance of the study was that "findings such as these can influence how elementary school administrators and central office administrators both choose and present new ideas for professional development" (p. 9). Ferguson continued that "by improving elementary teachers', elementary school administrators', and central office administrators' understanding of each other, the door to improve relationships will be opened and resentment between the groups may be reduced" (p. 10). Ferguson explained the importance of this concept: "by increasing the understanding between these three groups, the cost effectiveness and usefulness of professional development could be greatly enhanced" (p. 10).

Racek (2008) examined the differences within teacher subgroups and explored whether prior knowledge of the NSDC standards had an impact on practices. The purpose of this study was to examine the perceptions towards the professional development using the NSDC standards, comparing within the various sub-groups of the teacher demographics. Data forms

were analyzed using t-tests and an analysis of variance (ANOVA), which revealed that overall there was no statistically significant differences among the demographics of the groups. Two factors were identified that posed differences among teachers surveyed: prior knowledge of the NSDC standards; and differences in perceptions among teachers based on their jobs as elementary, middle, or high school teachers (Racek, 2008).

Racek's (2008) use of the SAI survey was guided by five research questions; two focused on prior knowledge of NSDC standards, and the other three focused on differences in perceptions regarding the content, context, and process standards. Racek (2008) also identified the importance that leadership played in the responses of the teachers for the context of professional development practices. Racek (2008) explained that "school or district administrators, community members, parents, teachers and other stakeholders including students can provide some leadership and staff and professional development initiatives" (p. 24). The implication is that "leadership that is focused on professional development will not simply provide common planning times or develop schedules that include opportunities for a variety of staff meetings, but will monitor, facilitate, and participate in these gatherings " (Racek, 2008, p. 26).

Racek's (2008) study focused on differences within various demographic subgroups, as opposed to the other studies that focused on differences between teachers and other education professionals. What he found was that the biggest differences existed in how professional development is perceived at different school settings; He remarked "What works in an elementary school where many classes are self-contained may not work in middle or high school settings where many of the teachers are specialists" (Racek, 2008, p. 94).

According to Racek (2008), the study contributed to the body of research in areas of school improvement and staff development by identifying some key areas the teachers perceive as important elements in their staff development. He asserted "this study also confirmed what so many others have, that there is really no significant difference between new or veteran teachers, but the setting can make a big difference" (Racek, 2008, p. 97).

Parker's (2003) study of effective staff development practices used the NSDC's standards for high-quality staff development. "The focus of this study was to explore whether a significant difference existed between teachers' and administrators' perceptions of effective staff development practices based upon the National Staff Development Council's content, process, and context standards" (Parker, 2003, p. 6).

Parker (2003) also utilized the NSDC's Self-assessment Inventory (SAI) in her research. The participant's responses were analyzed using frequencies, means, and standard deviations, using a general linear model (MANOVA). "Results indicated that no significant difference existed between teachers and administrators perceptions of effective staff development based upon these national staff development councils context, process, and content variables" (Parker, 2003, p. 122). This study was supported by twelve different research questions, each question aligned with one of the twelve NSDC standards for high-quality staff development.

Parker (2003) explained that the "causal-comparative study was designed to measure how teachers' and administrators' perceptions of staff development practices related to the 12 dependent variables outlined in the national criteria of effective professional development practices" (pp. 37-38). Her study mirrored earlier work done by Guskey and Sparks (1996), and Richardson (2003) which similarly focused on how local professional development was aligned to the NSDC standards.

A multivariate analysis (MANOVA) was conducted to determine if a significant difference existed. However, no significant difference was found between the teachers' and administrators' perceptions about effective staff development practices (Parker, 2003). According to Parker (2003), "having this clear vision of how district goals about effective staff development paralleled national standards is essential to increase teacher commitment to learning and focusing on student achievement" (p. 2).

This section focused on teacher and principal perceptions of professional development, and reviewed three major studies that synthesized research on the NSDC standards. The next section reviews studies on professional learning communities to support state-wide initiatives.

Professional learning communities that support state-wide initiatives.

Meyer's (2006) study focused on six Ohio districts engaged in a state-wide standards-based reform model known as the "Jennings Initiative" (p. 15). Meyer (2006) explained that "this study provides insight into the impact that teachers perceived to have occurred as a result of their district having participated in a three-year statewide collaborative initiative focused on major reform" (p. 27).

The purpose of the study was to examine the degree of which high-quality professional development was provided to teachers within six districts in the state of Ohio; it explored differences and teacher perceptions of high-quality professional development based upon the level of investment districts and schools made into teacher professional development over a four-year period.

"There were two major purposes identified for this dissertation. The first purpose was to identify how well districts replicated best practices and professional development within their district's schools a full year after the ending of a statewide project." (Meyer, 2006, p. 20). Meyer

(2006) continued: "the second purpose of this study was to examine whether teachers perceived that their district's engagement in the Jennings Initiative had any long-range impact on the ability to successfully implement a major reform initiative" (p. 21). Her study was guided by five research questions. Three research questions examined teachers' perceptions of a three-tiered (Levels I-III) level of professional development investment that were provided to the teachers. The fourth research question examined various demographic variables, such as gender and years of experience, that might impact teacher perceptions about the quality of professional development. Research question five addressed the impact that the Jennings Initiative may have had on the successful implementation of the reform.

The Meyer (2006) study examined the significance of different levels of investment into professional development design and delivery, using NSDC standards. Meyer (2006) looked at a three-tiered model, based upon the investment of time in various structures of professional development. Meyer's study has significance for the present study, which also examines a tiered model of staff development implemented in Montana for the state-wide Indian Education for All initiative.

In the Meyer (2006) study, Level I represented teachers who participated in general professional development strictly delivered within their school or district. Level II represented teacher leaders who engaged in cross-district, high-quality learning experiences during the three years of the Jennings Initiative, in addition to those provided within their district or school. Finally, Level III represented teachers in schools that had adopted formal structures for professional learning communities. Meyer's (2006) results "demonstrate the impact that participation in the Jennings Initiative had for teachers" (p. 269). Teacher groups involved with the Level III professional learning communities reported higher levels of implementation,

illustrating what many earlier studies had shown (DuFour & Eaker, 1998; Fullan, 1993; Hord, 1997; Joyce & Showers, 2002; Murphy & Lick, 2001).

Another important concept that Meyer (2006) utilized was the theory of critical mass, which is defined as the "amount or level necessary for a specific result or new action to occur which leads to self-sustaining action" (p. 274). Meyer identified the threshold of 30% of the population as an essential target for teacher buy-in to continue on a sustainable basis, after the staff development has occurred. This important concept as described by Meyer (2006) has been adopted by school reform models such as the New American Schools Reform Model. Meyer's application of the critical mass theory relates specifically to the Jennings Initiative, but is guided by Diffusion Theory (Rogers, 2003) which is discussed later in the chapter.

Meyer's (2006) survey asked respondents to indicate if their participation in the Jennings Initiative had "some impact" or a "major impact" at each of three levels: the district-level, the school-level, and the classroom-level (pp. 275-276). Meyer (2006) equated the response of "major impact" as achieving "buy-in" among the respondents. The results in Meyer (2006) towards achieving critical mass were as follows: (a) District-level (20%); (b) School-level (31%); and (c) Classroom-level (35%) were achieved respectively.

According to Meyer (2006), two major lessons emerged from the results of this study: a three-tiered approach in the investment of professional development was the most powerful determinant in teacher identification of "best practices" within their schools; and the professional learning team model for professional development was a major contributing factor in Ohio's successful reform initiatives (pp. 295-296).

Meyer's study embraced best-practices using a professional learning team model. These two factors are identified in Learning Forward (2011) as key elements to improve professional

learning. In addition to the use of the standards by a school or district, there are factors that pertain to the change process that educators also need to be aware of. The next section describes these factors, and the related literature.

The Adoption and Implementation of School Innovations

With all the time and money spent in education on professional development, one would think that implementations were successful the majority of the time. However, Senge (1990) noted, that most organizations learn poorly, because of the way they are designed, managed, and employees are taught to think and interact. Educational innovations require careful planning in order to implement new programs with integrity. George, Hall, and Stiegelbauer (2008) identified stages through which individuals progress as they implement an innovation and become competent in using it.

It has been noted earlier in this review of the literature, that among those researchers who focus on staff development initiatives, gaps are known to exist between the various initiatives that are designed to infuse new teacher skills and strategies in the classroom as compared to the resulting change in teacher practices that will actually impact student achievement (Fullan, 2003, 2010; Guskey, 2000; Killion, 2002; Reeves, 2009, 2010; Wagner et al., 2006). A similar theme has emerged among the researchers who look specifically at the adoption and change process in school systems themselves. The focus might be different among the body of research on staff development discussed earlier, and research regarding the adoption/implementation process, which is discussed in this section of the literature review. However, both bodies recognize that the changes required as part of new mandated school initiatives don't necessarily take hold with teachers. George, Hall, and Stiegelbauer (2008) stated: "In change implementation, there is a

chasm between adoption of new practices and their implementation which will result in improved student outcomes" (p. vii).

The following section explores the literature regarding the Concerns-Based Adoption Model (CBAM) and the Stages of Concern (SoC) About the Innovation, which have contributed information and research about the factors that influence the adoption and implementation of new programs. Historical development of the CBAM is explained, along with the key indicators and uses of the CBAM tools by school administrators, and policy makers responsible for introducing new innovations. This review also explores other models of change that have focused on school-based systems, as well as examining the factors that make the implementation of mandated school reform difficult.

The Concerns-Based Adoption Model and the Stages of Concern

The Concerns-Based Adoption Model (CBAM) is an adoption and implementation framework, supported by a set of data collection tools that administrators can use to track the implementing of particular reform initiatives in their school or district (George, Hall, & Stiegelbauer, 2008). According to George et al. (2008), the CBAM model and its tools are "among the most important contributions to research on the process of change in education in the past 30 years" (p. viii). George et al. (2008) additionally stated that "although CBAM and its diagnostic dimensions were developed in the 1970s by the Research and Development Center for Teacher Education at the University of Texas, the model and its tools remain as relevant now as they were then" (p. xi). CBAM tools are purported to "build knowledge about how teachers make sense of reform policies and resulting innovations" (George et al., 2008, p. viii). These claims seem like a tall-order to fill, especially considering how complex the concept of change really is, but claims are supported by a research-based conceptual framework.

According to George et al. (2008), "faculty and other staff members can use the CBAM tools to clarify the components of complex reforms" (p. viii). This framework is supported by three unique data collection tools, each focusing on its own set of factors within the adoption and implementation process: (a) the Stages of Concern Questionnaire (SoCQ) is a quantitative instrument that measures what a teacher or user is feeling about an particular innovation along a seven-point continuum, (b) the Levels of Use (LoU) is a in-depth interview protocol that measures teachers' implementation actions along a continuum of use in eight behavioral profiles, and (c) the Innovation Configurations (IC) Maps described what individuals will be doing as they are implementing with variations of practice from poor to ideal (George et al., 2008). School administrators can use these three tools to collect data that will help them determine what modifications or support they need to provide, such as more resources, or professional development to improve and sustain implementation of a standards-based reform (George et al., 2008). George et al. (2008) recognized that using all three of the CBAM tools can "add to the implementation literature to refine what is known about how teachers' cognition, affect, and sense of their situation helps them make sense of and interpret policy reforms" (p. viii).

The historical development of the CBAM and SoC.

According to George et al. (2008) the Concerns-Based Adoption Model (CBAM), evolved out of the work of Frances Fuller and others in response to the innovation focus approach to educational change in the late 1960s. Fuller, who was a counseling psychologist, conducted studies focused on teacher concerns during the 1960s, and her work was different from others in that she "approached her studies from a clinical rather than a pedagogical point of view" (George et al., 2008, p. 2). George et al. (2008) explain that what Fuller proposed in 1969 was a developmental sequence that corresponded with a teacher's particular career stage. "She

believed that teacher concerns occur in a natural sequence and are not simply a consequence of the quality of a particular teacher education program" (George et al. 2008, p. 3). Fuller proposed three career stages for a teacher that corresponded to the particular concerns they had at that stage: (a) the pre-teaching stage, (b) an early teaching stage, and (c) the late teaching stage (George et al., 2008).

According to George et al. (2008) the common thought in the 1960's was that "best practice was presented in terms of discrete innovations or programs, developed by an external source and presented to teachers and schools as a packaged product" (p. 1). This was known as the "innovation focus" and was a common component to the diffusion and adoption eras of the 1960s and 1970s (George et al., 2008). "Theoretically, teachers only had to adopt the innovation…to achieve the desired outcome promoted by the developer(s) of the innovation" (George et al., 2008, p. 1). This one-shot staff development approach was already being recognized as ineffective, as George et al. (2008) identified that in the majority of examples, the intended outcomes did not occur in the same way they did in the original site of development. George et al. (2008) further described that "attempts to resolve this dilemma led to many studies of the process of change or adoption of innovations, stimulating the investigation of multiple dimensions of a change process" (p. 1).

In 1970, a team of researchers located at the Research and Development Center for Teacher Education at the University of Texas in Austin, focused on what happens when individuals are asked to change their practice or adopt an innovation. Their research resulted in the Concerns-Based Adoption Model published by Hall, Wallace, and Dossett in 1973 and the along with diagnostic tools. George et al. (2008) described how the CBAM research team believed that change begins with the individual, so the team focused on understanding what

happens to teachers and college faculty when presented with change. According to George et al. (2008) the CBAM researchers observed that teachers and professors involved in adopting an innovation appeared to express concerns similar to the ones that Fuller had identified in 1969. The early framework became the Stages of Concern continuum, and according to George et al. (2008) this "became the hallmark of CBAM work, in that it provided a framework from which to understand the personal side of the change process" (p. 2). Successive elements of CBAM, the Levels of Use, and the Innovation Configurations developed as ongoing research was conducted on the change and adoption process (George et al., 2008 ; Hall, Hord, Huling-Austin, & Rutherford, 2004; Zmuda, Kuklis, & Kline, 2004).

As a result of the work by Fuller and the CBAM development team "efforts to improve teaching and learning processes moved away from discrete innovations and toward looking at change in terms of organizations and systems" (George et al., 2008, p. 2). George et al. (2008) explained that even though the framework for change moved from the one teacher-one innovation configuration to whole-school, the reality is that "no matter what the reform, someone still has to change" (p. 2). He reiterated "the CBAM provides a sound understanding of the affective and behavioral dimensions of change, whatever the innovation, and the diagnostic tools provide several ways to measure implementation from several different perspectives" (George et al., 2008, p. 2).

According to George et al. (2008) the original CBAM paper proposed that the manager/facilitator of a specific change could use the diagnostic tools, such as the Stages of Concern, to assess where the individual members of an organization are in relation to the adoption of change. "With those diagnostic data, the manager could then develop a prescription for any interventions needed to facilitate the change effort" (George et al., 2008, p. 5). Both the

Stages of Concern and the Levels of Use diagnostic tools were developed from this early research base (Hord, Rutherford, Huling-Austin & Hall, 2004; Horsley & Loucks-Horsley, 1998; Zmuda, Kuklis, & Kline, 2004).

George et al. (2008) explained that "with the stages of concern and levels of use as a foundation, the research team developed a complete model of the complex process of change that occurs when individuals in formal organizations are required to adopt an innovation" (pp. 4-5). George et al. (2008) further states that "together the Stages of Concerns and the Levels of Use provide a powerful description of the dynamics of an individual involved in change, one focusing on feelings, the other on performance" (p. 4). As these two diagnostic tools were used to collect quantitative data regarding the change and adoption process in organizations, the research team identified that individual teachers almost always modify innovations to fit their students and classrooms (George et al., 2008).

As a result, the Innovation Configurations (IC) were added as a third component to the model, which are intended to help change facilitators identify and describe the various forms an innovation can take from the least to the most ideal (Hall & Louck, 1981; Hall et al., 1987; Roy & Hord, 2003). "The Stages of Concern represent the *who*, the Levels of Use are the *how*, and the Innovation Configurations are the *what*" (George et al., 2008, p. 5). To summarize, the CBAM is a "conceptual framework that describes, explains, and predicts probable behaviors throughout the change process, and it can help educational leaders, coaches, and staff developers facilitate the process" (George et al., 2008, p. 5).

The Stages of Concern as a key indicator of implementation readiness.

The Stages of Concern (SoC) About an Innovation was developed as one of three diagnostic dimensions of the CBAM, and as described by George et al. (2008) "became the hallmark of CBAM work, in that it provided a framework from which to understand the personal side of the change process" (p. 2). According to George et al. (2008), during the early CBAM research, the team identified two common components to the change and adoption process: definite categories of concerns among the individual innovation adopters exists, and that as users became increasingly confident in using innovations the concerns change in what seems to be a logical progression .

At the core of the CBAM and the SoC diagnostic tool is the term *Innovation*, and George et al. (2008) describes it as "the generic name given to the object or situation that is the focus of the concerns" (p. 7). The innovation provides the context or as George et al. (2008) noted "a frame of reference from which concerns can be viewed and described" (p. 7). Participants in a newly introduced program or policy might be caught off guard with the term "innovation" being used because they might personally have prior knowledge or experience with it. However, this should not stop administrators and policy makers from using the term, because as George et al. (2008) explained, that the innovation is not necessarily new and that "it may be a new strategy, program, or practice, or it may be something that has been in use for some time" (p. 7).

CBAM identified seven Stages of Concern (SoC) About an Innovation through which individuals progressed as they implemented an innovation and became more skilled using it. Table 1 illustrates the seven Stages of Concern and the correlating expressions that individuals generally voice while progressing thru that stage (George, et al. 2008).

Table 1
Typical Expressions of Concerns About an Innovation

Stages of Concern		Expressions of Concern
"Impact"	6	I have some ideas about something that would work even better.
	5	I would like to coordinate my efforts with others, to maximize the innovation's effect.
	4	How is my use affecting my students?
"Task"	3	I seem to be spending all my time getting materials ready.
"Self"	2	How will using it affect me?
	1	I would like to know more about it.
"Unconcerned"	0	I am not concerned about it.

Source: Figure 1.2, George et al., 2008, p. 4. (Reprinted with permission from SEDL)

The key to utilizing SoC as a diagnostic tool, to assist organizations in the change process, is to recognize that the data collected represents an individual's readiness to implement a particular innovation based on where they are at along a continuum of concerns. According to George et al. (2008) "the emergence and resolution of Concerns about innovations appear to be developmental, in that earlier concerns must first be resolved…before later concerns can emerge" (p. 8). In other words, individuals within an organization will be somewhere along this continuum regarding a particular innovation based on their current concerns, and must have these particular concerns addressed prior to showing growth in their readiness to implement the new program or policy. "The research suggests that this developmental pattern holds for most process and product innovations" (George et al., 2008, pp. 8-9).

The power of using the SoC as a diagnostic tool is in understanding this progression, and the principle that "concerns will vary depending on the amount of a user's knowledge about and experience with the innovation" (George et al., 2008, p. 7). The administrator or change agent

must focus efforts in identifying where an individual is along the Concerns continuum, as a means to understand where this individual is in their ability, or readiness, to implement the innovation effectively and with fidelity. The SoC recognizes that individuals can experience more than one concern about an innovation at the same time. As George et al. (2008) explain "although we can experience many types of concerns about an innovation concurrently, an individual will perceive certain aspects of the innovation as more important than others at a given time" (p. 7).

The progression from lower stages to higher stages on the concerns continuum illustrates the desired pathway that staff members take when presented with a new program or policy. "It appears that a user's concerns about an innovation progress toward the later, higher-level stages…with time, successful experience, and the acquisition of new knowledge and skills" (George et al., 2008, p. 9). Individuals who would fall within the continuum at a *Stage 0 – Unconcerned* score have expressed that they are not concerned with the adoption of the new program. The SoC's interpretation of a Stage 0 score is such that an individual will probably not implement the innovation. Individuals who are either at *Stages 1 or 2 – Self*, show very little readiness to move forward with effective implementation. These individuals might make an attempt out of compliance or curiosity, but they are concerned with learning more about the innovation itself (stage 1), or more concerned about how the innovation will impact them personally (stage 2). They are not concerned with how the innovation could improve student learning. Individuals at *Stage 3 – Task* are further along the continuum, and demonstrate expressions of concern that they are now beginning to think beyond themselves, focusing on preparing for the innovation's use in their classroom.

A teacher at stage 3 has addressed earlier stage concerns and now worries about the management needed to make it work. A shift along the Concerns continuum is happening, because "the user of an innovation may experience a certain type of concern rather intensely, and then as that concern subsides, another type of concern may emerge" (George et al., 2008, p. 7). A teacher who has progressed to stage 3 is growing, and is now beginning to implement the new program or policy.

An administrator who steps away from the efforts of supporting the stage 3 teacher is ignoring what SoC research has identified: teachers will exhibit other stages of concern beyond this point. The administrator should take notice of SoC research that has "demonstrated how effective it can be to recognize the inevitable presence of concerns within individuals and to extend a helping hand to assist in coping with and resolving those concerns" (George et al., 2008, p. 9).

Stages 4 thru 6 are labeled with the title "Impact" because the concerns that are expressed here focus on improvements in the classroom. Stage 4 expresses the concern about how the innovation is affecting the teacher's students. The shift from worrying about themselves (stages 1 & 2) and the management (stage 3) of the innovation to a student-centered concern (stage 4) signifies the teacher's readiness to implement the new program or policy (Hall & Hord, 2011; Zmuda, Kuklis & Kline, 2004).

Stage 5 is focused on the desire to collaborate with other staff members, and illustrates a concern that steps must be taken to get the "maximum" effect from the efforts to implement the innovation. Stage 6 illustrates a teacher who has gained enough experience and knowledge with the new program that they are now concerned about ways to improve the innovation itself.

Collectively, Stages 4 thru 6 represent the target stages for an administrator to target when looking to grow capacity in their staff members (George et al., 2008; Hall & Hord, 2011).

The SoC is a powerful tool that is available to administrators and other policymakers who are tasked with making change happen in an organization (Hord & Hall, 2011; George et al., 2008; Zmuda, Kuklis & Kline, 2004). George et al. (2008) does recognize that holding and changing concerns is a dynamic of the individual. However, the SoC model does indicate that an administrator, by "providing affective experiences and cognitive resources in a timely manner certainly can supply the grist for the emergence and resolution of concerns, thereby facilitating the development of higher levels of concern" (George et al., 2008, p. 9).

In conclusion, the SoC model is "a framework designed to help change facilitators identify the special needs of individuals involved in the change process and address those needs appropriately based on the information gathered through the model's diagnostic dimensions" (George et al., 2008, p. 1). Many factors exist influencing the change process in an organization, and impact whether new ideas or programs are adopted successfully or not. Some of these factors, and the related research which is explored next.

Innovations and the Factors that Influence Them

The prior section of this literature review explored the concept of change through the microcosm of understanding someone's concerns about that change. This next section reviews the literature regarding the larger concept of change and the factors and principles that impact new innovations.

"One of the most critical reform challenges faced by schools today can be expressed simply: If teachers are to successfully teach all students to high standards, virtually everyone who affects student learning must be learning virtually all the time" (D. Sparks, 2000, p. ix).

Thomas Guskey (2000) explained that this ongoing nature of professional learning should be a purposeful an intentional process that is carefully designed to bring about positive *change* and improvement. However, Gene Hall and Shirley Hord (2011) cautioned leaders to remember that "change is highly complex, multivariate, and dynamic" (p. 5).

The processes needed to create a clear and purposeful plan to initiate change is not always clear to administrators. Hall and Hord (2011) stated:

> One of the problems in the field of change is that there is no agreement on the meaning of commonly used terms. For example the word change can be a noun or a verb. The word also can be used represent the whole of a change effort. (p. xxiii)

Hall and Hord further explained that the Concerns-Based Adoption Model (CBAM) is a valuable model for school leaders to utilize to successfully implement new changes because: a) it offers a number of important ways to understand how people respond to change; and b) it approaches change and innovation as being synonymous.

Hall and Hord (2011) defined the term *innovation* as a new program or practice; extending the original definition in the CBAM first proposed by George et al., date. “This perspective is based in our developing understanding of the efforts of individuals to learn about and become skilled and confident in using innovations" (p. xxiv). Everyone experiences change, but these changes may be more familiar to one individual as compared to another, and results in a different response and readiness for implementation. Guskey (2000) suggested that the reason for the many failed approaches to educational reform, by way of professional development plans, is that organizations are unclear or misled about the kind of support required to implement innovations they don't truly understand.

Several researchers (DuFour & Marzano, 2011; Guskey, 2000; Hall & Hord, 2011; Reeves, 2010) have identified common problems with professional learning that have led to failed implementation of new innovations: (a) most of the educational field have been taught in one-shot, fragmented, and piecemeal approaches, which does not work; (b) too frequently developers of educational innovations don't think clearly about the big picture of what their change needs to entail, but instead have thought only about what is needed for training materials; and (c) teachers are short on time, therefore they have a tendency to make changes, or create short-cuts while participating in change.

The next sections explore some principles of change: leadership and change facilitation; adopters and implementers; communications and time; and mandated innovation.

The principles of change.

According to Hall and Hord (2011), changes require an investment of time and effort by both individuals and organizations to make them operational, and the planning begins and ends with understanding the various implementation constructs and dynamics. The change process has been researched long enough that a series of principles have been identified that will hold true for all cases. "These principles are no longer debatable points, for they summarize predictable aspects of change" (Hall & Hord, 2011, p. 5). Hall and Hord (2011) further explain that these principles address aspects of change where patterns are clear, but do not cover all aspects of change.

As noted by Guskey (2000), professional development is a crucial and important piece in any reform movement in education. Hargreaves and Fullan (1998) and Hunter (1990) all supported Guskey's thoughts on professional development's importance to change success. Guskey (2000) explained that learning makes it possible to make the change, but before these

new changes are implemented in the classrooms, the instructional staff must change their teaching. Professional learning has a major impact on the delicate relationship between those individuals who lead the change process and those who have a responsibility to implement the innovations.

Leadership and change facilitation.

Hall and Hord (2011) explained that administrator leadership is essential to long-term change success. "Many implementers believe that they do not need any involvement from or with those above them. The findings of research and experience argue for a different conclusion" (p. 13). They further described that even though innovations can be initiated at the classroom-level, without administrative support at all levels above, the change effort will most likely fail. Several other researchers have also supported the idea that administrators are essential to successful education reform (Drago-Severson, 2004; Fullan, 2005; Miller, Devin & Shoop, 2007; Sergiovanni, 1992).

On the other hand, Hall & Hord (2011) stated that "successful change starts and ends at the individual level" (p. 9). As organizations adopt an innovation, just as important for a leader to keep in mind, is that successful implementation depends on the individual. Therefore, Hall and Hord pointed out that leaders need to plan to anticipate and facilitate change at the individual level. Change leaders can do this by recognizing two factors that impact change: change facilitator styles; and innovation adaptations.

Change facilitator styles.

"There are patterns and similarities among those leaders who do make a difference and among those who do not make a difference" (Hall & Hord, 2011, p. 118). Hall and Hord further explained that the idea for Change Facilitator Style emerged out of the correlation between the

intervention behaviors of school principals with the extent of implementation success that teachers experienced. Many studies support the Change Facilitator Styles (Entrekin 1991; Hall, Rutherford, Hall, and Huling 1984; Hougen 1984; Schiller 1991; Trohoski, 1984).

Change Facilitator Styles reflect the fact that not all principals have similar views regarding their roles and priorities, and this impacts what they actually do day-to-day (Hall & Hord, 2011). According to Hall and Hord, there is a high degree of implementation success correlated with the principal's Change Facilitator Style. Their research indicated that there were three contrasting approaches that are often seen in the change process: (a) the initiator, (b) the manager, and (c) the responder.

Initiator principals are thought to *make it happen*. "Initiators focus on doing what is best in the long term for students in the school, rather than primarily on making people happy in the short term" (Hall & Hord, 2011, p. 125). Hall and Hord further explained that teachers with Initiator principals have the highest levels of implementation success.

Manager principals are said to *help it happen*. "Schools with manager leaders attain implementation success. However, little effort is made to move beyond acceptable minimums" (Hall & Hord, 2011, p. 125). Teachers with Manager principals do achieve implementation success, but not to the same degree as teachers in Initiator schools.

Finally, Responder principals are alleged to *let it happen*. "Responders ask about concerns but are less active in attempting to resolve them in facilitating change. They just tend to keep checking on how people are feeling about issues in general" (Hall & Hord, 2011, p. 125). Schools with Responder principals are rated at a distant third in terms of implementation success (Hall & Hord, 2011).

Research on change facilitators illustrates that three different styles of leadership influence how a principal responds to change and innovations. These three styles also help determine how they will identify and respond to the staff members' behaviors towards the innovations. There are two general behavioral patterns of teachers that must be noted. First, teachers will attempt to modify or simplify the change, which is known as an Innovation Adaptation. Second, teachers will display various levels of resistance for differing reasons.

Innovation Adaptations.

Hall and Hord (2011) defined *Innovation Adaptations* as "the tendency to adapt, modify, and/or mutate aspects of innovations" (p. 45) and they explained that it is a natural part of the change process which happens for a number of reasons. Hall and Hord (2011) identified that there are ways to chart these adaptations and to assess their overall impact on the implementation process. They further explained the importance of doing so, because innovation adaptation might occur to the point where the implementing teacher is no longer doing what the innovation intended. Guskey (2000) identified that teachers' tendencies to revert to old practices are the all too common results for adaptations.

"In most change efforts some people will *appear* to be resisting and some may be actively sabotaging the effort. The first step is to determine the reason for the apparent resistance" (Hall & Hord, 2011, p. 12). Hall and Hord (2011) identified three possible reasons for the apparent resistance: (a) the individual is working through the sense of loss for having to stop doing something that was comfortable to them; (b) the individual is having serious questions about whether the change will really be an improvement over what they're doing now; and (c) the individual is reacting to the pain that is a natural part of the change process. By this, they meant that change is often an uncomfortable process for people to experience. Hall and Hord make

clear that appropriate interventions reduce resistance to change and each of these concerns require very different interventions. “Carefully planned and executed interventions are key to the success of the change process” (Hall & Hord, 2011, p. 11).

"What facilitators of the change process do needs to be reflective of the concerns of those engage with the innovation and those considering its use" (Hall & Hord, 2011, p. 71). Research studies document patterns and developmental pathways of concerns as the change process occurs. Though the ideal flow is not always guaranteed and it isn't always unilateral, Hall and Hord identified that strong leadership for change, and a strong and carefully facilitated process improves the chances of implementation success.

Adopters & Implementers

As already established by Hall and Hord (2011), resistance is a natural part of all change processes whether it's because of uncertainty, self-doubts, or grieving over loss of things that are currently comfortable to them. “What many leaders see as resistance to change may in large part be grief over the loss of favorite and comfortable ways of acting" (p. 8). However, leaders in the change process must remember that the individuals responsible for implementing the change are the key to any innovation. The emphasis that Hall and Hord (2011) placed on the importance of the individuals who will actually adopt and implement the innovation can be further explained through two theories that focus on these individuals: the implementation bridge; and the diffusion theory.

Implementation Bridges.

Hall and Hord (2011) described how an affective dimension can be observed for the many stages that the adopter/implementer experiences during the change process, which is an illustration of the personal side of change that everyone goes through. "People respond to and

implement change in typical patterns....Change process leaders can and should anticipate many of these patterns" (p. 10). Hall and Hord identified that an *Implementation Bridge* is needed for successful implementation.

Hall and Hord (2011) defined implementation bridges as the "research-based constructs and tools that can be used to facilitate individuals and organizations in moving" (p. 11) across the gap between current practice and changes in practice. Without this bridge, those who need to adopt and implement the innovation need to make a *giant leap* which presents a major barrier to chances of success. Several researchers have also described the implementation bridge (Hall, Loucks, Rutherford & Newlove, 1975; Hord & Huling-Austin, 1986), while others have referred to this concept as “learning transfer” (Bellanca, 2009; Costa, 1991; Fullan, 2013).

Hall and Hord (2011) explained that the giant leap that has to happen is due to the gap between preparing to do something and actually doing it. Reeves (2004, 2010) referred to this same concept as the “knowing-doing gap”. There are certain factors that an organization must focus time and attention towards in order to be successful in any program. “The operationalization of these factors in a school makes a significant difference in the staff’s concerns about change and in the amount of success in moving across the implementation bridge" (Hall & Hord, 2011, p. 16).

Hall and Hord (2011) explained how implementers of an innovation are at diverse points along a continuum of being *real resistors* to *adopters* for reasons that are varied and depend on the individual positions or concerns. These authors further described how the *Stages of Concern* profiles, as described earlier in this chapter, represent one way of assessing how far across the Implementation Bridge a particular individual has progressed.

Diffusion Theory.

While the *Stages of Concerns,* and the principle of *Implementation Bridges* offers a couple of models to understand how individuals involved in the change process work towards implementation of new programs, the Diffusion Theory represents the perspectives about change inside of social systems. The perspective of Diffusion as related to change has been researched for over a century (Mort, 1953; Rogers, 2003; Ryan & Gross, 1943; Tarde, 1903). Several factors of Diffusion Theory are explored in the following section.

Characteristics of adopters.

According to Hall and Hord (2011), the general set of *Adopter* categories is the most widely studied and agreed upon component of Diffusion research. Rogers (2003) proposed five categories that are consistently found within all innovations regardless of culture: (a) Innovators; (b) Early Adopters; (c) Early Majority; (d) Late Majority; and (e) the Laggards. Other authors such as Gladwell (2000), Moore (2002), and Sinek (2009) have expanded on the ideas of Rogers (2003).

Rogers (2003) described the *Innovators* as venturesome at heart and are looking for new ideas with excitement for the sake of trying something new. Innovators are typically more involved and have greater networks that allow them to be the first to hear about innovations. Their focus tends to be internal control over their own destiny.

Early Adopters are described by Rogers (2003) as being respected by their colleagues due to their longevity in their positions, and the ability to look reasonably at a new innovation before they decide to adopt. The importance this group plays in the change process is that if the

innovation is reasonable, they will promptly adopt it, and by doing so, lend support to the new program.

The next group is described as the *Early Majority* due to what Rogers (2003) estimated to be 34% of the total population of potential adopters. According to Hall and Hord (2011), they are considered connected, but not as influential as the prior groups. They are careful, more deliberate, and give more consideration to the adoption process. The Early Adopters are "an important Target for those who want to see an innovation adopted by many individuals" (Hall & Hord, 2011, p. 220).

Another large group of potential adopters identified by Rogers (2003) is the *Late Majority* and they also represent about 34% of the total population. This group is slow to adopt and approach innovations with doubt and caution, because they see failure as a higher risk for themselves. The Late Majority adopt "only when there is pressure from others or the need becomes very strong" (Hall & Hord, 2011, p. 220).

The final group, known as the *Laggards,* resists change and new ideas. Rogers (2003) described the characteristics of the Laggards as conservative, have fewer connections, and tend to be less educated and wealthy. As a result, Hall & Hord (2011) explained that Laggards will most likely be less informed about potential benefits of the innovations, and will likely be trapped where they are at. They view the innovations as "risks" and they have the potential to sabotage the adoption by others (Hall & Hord, p. 221).

These five categories of adopters illustrate the "who" of the adoption and implementation process. Two other factors of the diffusion perspective (the S-Curve and critical mass; and communications networks) relate to time and communications, which is the next major topic that is explored.

Time and communications as related to diffusion.

The aspects of time and communications are both major factors that impact the adoption of innovations. Both time and communications have been researched as separate principles of the change process, and are also linked aspects of change as through the Diffusion Theory.

Two key components are communications networks and the rate [amount of time] that adoption will take place. Hall and Hord (2011) defined communications networks as the geographical regions, communities, or social groups where some people are more closely connected to others of similar proximity or interest. Hall and Hord (2011) explained that it is through communications that people learned about and essentially decided to adopt new innovations. These authors further noted that the types and layouts of the communications networks can enhance or inhibit information about the innovation and therefore, impact the rates of adoption. These authors proposed that change leaders can increase the rate of adoption by examining the communications and the interpretations by individuals inside the networks.

"The amount of communication and the number of people engaged in making and receiving communications is a key to adoption rates" (Hall & Hord, 2011, p. 224). The guiding principle of utilizing communication networks is to positively impact innovation adoption by going to where the people are communicating. According to Hall and Hord (2011) the positive relationship exists between more communications and the rate of adoption.

This positive relationship can be illustrated by graphing the percentage of adopters (y-axis) in relationship to time (x-axis). The resulting S-shaped curve was first noted by researchers Bryce Ryan and Neal C. Gross in 1943, but according to Hall and Hord (2011), appear in all

studies that focus on rate of adoption. The only difference from study-to-study is the "steepness" of the curve.

Hall and Hord (2011) explained that the S-curve illustrates how the adoption of the innovation begins slowly with the small percentage of Innovators, and as time progresses and the adoption decisions are made by the Early Adopters and the Early Majority the curve progresses upward at a higher rate. As the Late Majority, and finally the Laggards, decides to adopt the innovations at a slower pace, the curve begins to gradually level off until adoption approaches 100%.

One of the important points along the S-curve that researchers have identified is known as *Critical Mass*. Hall and Hord (2011) defined critical mass as the certain point in the adoption process, where the activity and the rate of adoption are sufficient enough to become self-sustaining. The actual point will vary, but "the actual point along the S curve at which critical mass occurs seems to range from 16% to 40%" (Hall & Hord, 2011, p. 223). It is important for change leaders to evaluate where their organization is along this S-curve, and to determine if critical mass has been reached.

Time Needed for Professional Learning

According to Hall and Hord (2011), time is also a separate principle that impacts change and the adoption of innovations. Early research that lead to the CBAM, applied the assumption that change is a process, and not an event. From this perspective, time takes on both a philosophical and a practical dimension in its impact on change. Hall and Hord (2011) noted that the strategic plan for change will be different, depending on whether it is assumed that change is a process or an event. "It will allow at least three to five years for implementation and will budget the resources needed to support formal learning and on-site coaching for the duration of

this phase" (Hall & Hord, 2011, p. 8). Multiple studies (George, Hall, &Uchiyama 2000; Hall & Loucks 1977; and Hall & Rutherford 1976) have identified change as a process through which people and/or organizations move as they learn, understand, and become capable of utilizing new skills. "Our research and that of others document that most changes in education take three to five years to be implemented on a high level" (Hall & Hord, 2011, p. 8).

Likewise, Gusky (2000) described professional development as an ongoing process because "education is a dynamic professional field with a continually expanding knowledgebase" (p. 19). Guskey also explained that educators must be willing to be continuous learners throughout the entire span of their professional careers in order to stay ahead of all the innovations.

Ali (2004), Darling-Hammond and Richardson (2009), and Yoon, Duncan, Lee, Scarloss and Shapley (2007) all emphasize the positive relationship between increased student scores and the higher number of total hours a teacher has for professional learning annually. "A review of well-designed studies found that teachers who receive…an average of 49 hours annually across the nine studies reviewed - boosted their students' achievement by about 21 percentile points" (Darling-Hammond, 2009, p. 56).

According to Hall and Hord (2011) one of the problems is that "too many policymakers at all levels refuse to accept the principle that change is a process, not an event, and continue to insist that *their* changes be implemented" (p. 8). Hall and Hord explained that the mistake that leaders typically make is that when significant differences are not found within the first or second year, the conclusion is falsely drawn that the innovation does not work, when in fact there was not enough time and support.

Hall and Hord (2011) point out that for each new unit [individual, department, or school] that adopts the change, the three to five year timeline begins at the beginning. Guskey (2000) explained that educators need to view professional development not as a special event that occurs a few times throughout the year, but instead as an ongoing, job-embedded process.

Hall and Hord (2011) concluded that there are very few shortcuts, but the use of the constructs and tools [such as Stages of Concern] will significantly improve a higher level of implementation. They stated, “failure to address key aspects of the change process can either add years to, or even prevent, achieving successful implementation" (p. 8).

Communications and Change

The principle of communications, like time, has dimensions that impact the adoption of innovations. The relationship that communications has within the Diffusion Theory has already been discussed. Communications also play a major role in reducing confusion among individuals within an organization, and helping to clarify the vision and goals of the innovation. Guskey (2000) stated that "true professional development is a deliberate process, guided by a clear vision of purposes and planned goals" (p. 17). Guskey further explained that when communications are clear, it is easier to gather the kind of information that is needed to verify whether or not the goals are met. Others who came to similar conclusions include Drucker (1999), DuFour and Marzano (2011), Fullan (2009), Hargreaves and Fullan (1998), Schreck (2009), and Senge (1990).

Unfortunately, clear communications are not typical in the change process. Hall and Hord (2011) explained that due to the multiple architects, such as principals, district administrators, or outside consultants who are involved in the change, implementers do not fully understand what the change should look like when it is implemented in the envisioned way. When these

conflicting communications happen, teachers will create their own versions of the change as they try to use the materials and programs that have been introduced. As a result, there are serious difficulties in evaluating the implementation. Hall and Hord (2011) stated that “this is particularly problematic when what is being done under the name of the innovation is different in various classrooms" (p. 43). Hall and Hord (2011) identified some points that leaders can remember to improve communications: a) be sure to use many channels to communicate what is coming; b) communications must start before implementation is to begin (preferably in the spring prior to the next school year); and c) one-time announcements are not effective in getting the message to everyone.

The Difficulties of Implementing Mandated School Reform

Because users of innovations tend to adapt, or in some cases mutate innovation, Hall and Hord (2011) suggested that change leaders must identify to what extent there is a need to advocate for close adherence to the developer's intended model, also known as a fidelity approach. A mandate is one kind of strategy that is used widely for the introduction and implementation of innovations. “Although mandates are continually criticized as being ineffective because of their top-down orientation, they can work quite well” (Hall & Hord, 2011, p. 15).

Mandates come in different forms, whether a locally required teaching strategy, a district-wide initiative, or state-wide innovations required by law (e.g. Montana’s Indian Education for All Law). “With a mandate the priority is clear, and there is expectation that the innovation will be implemented” (Hall & Hord, 2011, p. 15). Hall and Hord identified how a mandate works when it is accompanied by: (a) continuing communication; (b) ongoing learning; (c) on-site coaching; and (d) time for implementation (p. 15). Hall and Hord (2011) suggested the bad

reputation that mandates garner is because they are not properly supported, and not because the strategy itself is flawed. “The mandate strategy fails when the only time the change process is supported is at the initial announcement of the mandate" (Hall & Hord, 2011, p. 15).

Another typical barrier to the success of mandated reform is the lack of financial support, also known as *unfunded mandates*. Johnson (2004) reported that among all of the frustrating barriers that get in the way of improving schools, educational leaders have identified that money is the “most pressing issue” (p. 24). Johnson further reported that educational leaders have experienced enormous increases in mandates without the additional resources to implement them. “School leaders find the variety, scope, and number of mandates…eat up precious money, energy, and time” (Johnson, 2004, p. 25). Zimmerman and May (2003) identified that lack of funding was the second largest factor that inhibited professional development efforts.

According to Trainor (2007), the unpopular attempt to raise local taxes to pay for unfunded mandates typically results in “backlash at the polls” (p. 46). What choices do districts have when they face possible penalties if mandates are not met? “Some districts have been forced to eliminate professional development programs for teachers and administrators” (Trainor, 2007, p. 46). This solution, however, is contradictory to the connection that several studies have established, linking professional learning to change (Blasé & Blasé, 2001; Corcoran, 1995; Diaz-Maggiolo, 2004; Elmore & Burney, 1999; Little, 1993). “Professional learning is always designed to support any kind of change, and change does not occur without professional learning” (Hirsh, 2011, p. xx).

Guskey (2000) reported that some educators object to the specification of the [mandate’s] purposes and goals, thinking that this might narrow their learning options and limit their possibilities and choices. However, Guskey described how staff development should not be a

random or haphazard process, but must be purposefully designed to bring improvement. “A clear, systemic approach to professional development that considers both individual and organizational development is necessary for improvement" (Guskey, 2000, p. 21).

Guskey (2000) identified three important implementation designs to examine: (a) a district-wide design; (b) a site-based design; and (c) the integrated design, which incorporates the positive aspects of both district-wide and site-based approaches. He noted the trend to move away from district-wide designs and towards strictly site-based approaches is the wrong move, commenting that site-based efforts have a better chance of being implemented, but a broader view that sees beyond school buildings and classroom walls is required for systemic reform. "Thoughtful combination of large-scale and context specific approaches can optimize potential benefits of each [design] and drastically improve both the efficiency and effectiveness of professional development practices" (Guskey, 2000, p. 31).

Montana Indian Education for All

The historical development of the Montana Indian Education for All law spans nearly 40 years. It is important to put it into the perspective of Denise Juneau, Montana Superintendent of Public Schools, who stated: “The twin hopes of Montana’s constitutional obligation, Indian Education for All, is that Indian students will feel themselves welcomed when they see themselves reflected in their school hallways and curriculum” (D. Juneau, 2006, p. 3). Montana Indian Education for All is a constitutional mandate, required by state law (Montana Code Annotated 20-1-501) and funded by the legislature. However, the constitutional mandate became law in 1972, but was not substantially funded until 2005. Elser (2010) stated that: “teachers face unique challenges and opportunities and may experience both self-doubt and triumph in their efforts to implement [Indian Education for All]” (p.1).

The historical development of Indian Education for All.

During the 1972 Montana Constitutional Convention, two American Indian students from the Fort Peck Reservation asked for "the opportunity to study their own culture" (p. 193). After thoughtful discussion among the delegates, the Montana Constitutional Article X, Section 1(2) was approved by an 83 to 1 vote and reads: "Montana recognizes the distinct and unique cultural heritage of the American Indians and is committed in its educational goals to the preservation of their cultural heritage" (Constitution of Montana, 1972; Juneau & Broaddus , 2006).

What first resulted from the constitutional mandate was the requirement that all teachers be required to take an Indian Studies course as part of their higher education degrees (M. Sheehy-Moe, personal communications, Nov. 19, 2011). The misconception at the time was that requiring this training would result in the infusion of American Indian cultures within the K-12 classroom. "Although the constitution outlined a need for Indian Studies in Montana schools, the state did not allocate funding for the provision, which resulted in the failure of numerous attempts to implement it into the curriculum" (De La Mare, 2010, p. 3).

Nearly three decades later, in 1999, Rep. Carol Juneau sponsored House Bill 528. This bill passed, becoming MCA 20-1-501, Indian Education for All Law. It reads:

> Every Montanan … whether Indian or non-Indian, be encouraged to learn about the distinct and unique cultural heritage of American Indians in a culturally responsive manner … All school personnel should have an understanding and awareness of Indian tribes to help them relate effectively with Indian students and parents … every educational agency and all educational personnel will work cooperatively with Montana

tribes … when providing instruction and implementing an educational goal. (MCA 20-1-501)

While the Indian Education for All Law (MCA 20-1-501) more clearly defined what educators were expected to do, the law was unfunded and therefore fell short of implementation. It wasn't until the funding lawsuit against the State of Montana by the Montana Quality Education Coalition (MQEC) five years later, that the level of Indian Education for All support the state had provided over the years was declared unconstitutional.

In 2004, under what is known as the Sherlock Decision, the state was found to be "defenseless on the [lawsuit's] claim that Article X, Section 1(2) of the Montana Constitution has not been implemented by the State despite the constitution's direction to do so" (Sherlock, 2004, p. 50). After the decision was appealed by the state, the Montana Supreme Court upheld the ruling that the state's lack of support and action to implement Indian Education for All was unconstitutional. "After these lawsuits, the state was forced to recognize its educational obligation to teach Indian studies, and in 2005 legislators allocated $3 million to the state's Office of Public Instruction (OPI) and $7 million to the state's school districts for implementation" (De La Mare, 2010, pp. 3-4).

The Montana Professional Development Partnership.

Once Indian Education for All had both the letter of the law and the financial supports from the legislature, Montana educators were still in need of a professional development plan that would provide them the background, resources, and confidence to begin implementation. During the same 2005 legislative session that saw the fruition of the first state monies dedicated towards Indian Education for All efforts, the state of Montana received an ESEA Title II, Part A grant to help support the staff development initiatives within the state. A portion of this money

was dedicated by the Montana Board of Public Education (BPE) and the Office of Public Instruction (OPI) towards a competitive grant known as the Montana Professional Development Partnership (MPDP) Project. According to K.J. Miller, the MPDP was a shared vision between the Montana BPE and OPI for the creation and sustainability of Regionalized Education Service Agencies across the state of Montana (personal communications, April 2005).

The state of Montana had developed and supported a similar program known as the Comprehensive System of Personnel Development (CSPD) since the 1970's. "Special education law has required states to have a Comprehensive Systems of Personnel Development (CSPD) since 1975" (Copenhaver, 2000, p. 4). Montana is divided into five separate CSPD regions and is governed by the state as well as individual advisory boards. Though the state had the CSPD regions in place, the focus of these regions are predominately training related to special-education. According to Copenhaver (2000), the purpose of the state CSPD is "a process which includes pre-service, in-service, and technical assistance for parents, general education teachers, special education staff, administrators and other service providers with the end result being better programs and services for students with disabilities" (p. 4). The MPDP project goals had an expanded focus, and therefore a need to develop new regional partnerships emerged.

In April 2005, the Montana OPI released the request for proposal of the MPDP grant through a competitive process. One of the main purposes of the MPDP project was the creation of Educational Service Agencies (ESAs) as stated by the original request for proposal:

> This program seeks to encourage and support the development of regionalized delivery models that will address the challenges and limitations that are presented by the geographic size and rural nature of Montana to the effective delivery of these high-quality professional development opportunities. (Montana OPI, 2005, p. 4)

The Montana OPI awarded two regional grants in August of 2005, with the intentions to expand to five regions that mirrored the five CSPD regions. The goal was not to duplicate the CSPD regions, but instead to augment the services that were being offered in the regions, and the requirement was added to the MPDP grants to include the respective CSPD directors in the partnership. The two regional grants were awarded to the Western Montana Partnership for Educational Resources (WMPER), and the Montana North Central Education Service Region (MNCESR). These two initial grants were three year pilots for the state and helped to determine governance structures and the logistics of state-wide initiatives that were to become the emphasis of the regional service agencies.

The requirement to incorporate the state's Indian Education for All initiative into the regional staff development plans for the MPDP project was a requirement from the beginning. In the initial communications letter from the Montana OPI to the regional service agencies, three types of regional professional development models were required to be developed: (a) staff development support to individual or small groups of districts to address the needs identified through the Five-Year Comprehensive Plan, (b) serve the broad cross-section of district needs based on a regionalized needs assessment, and (c) the design and delivery of state initiatives (A. McMilin, personal communications, October 25, 2005). This third model was utilized by Montana OPI to deliver Indian Education for All content as it was developed. "The regionalized model can provide a vehicle for the design and delivery of state professional development initiatives such as Indian Education for All" (A. McMilin, personal communications, October 25, 2005).

The Montana OPI brought the directors of MNCESR and WMPER together in the fall of 2005 to begin the planning and development of this particular model. The Montana OPI Division

of Indian Education, led by Denise Juneau, had already begun development of state-developed resources, and now the MPDP grants were in place to begin planning the roll-out initiatives to educators across the state. At this fall 2005 meeting between the Montana OPI Division of Indian Education and the MPDP directors, D. Juneau presented the *Draft Implementation Plan for the Seven Essential Understandings* to the group, in which item #12 stated: "Plan and implement state-wide staff development, K-12, including all teachers, administrators, school boards, aides, etc." and that the regional service agencies must "identify training cadres and ensure longevity of training plan" (D. Juneau, personal communications, November, 2005). The group consensus was the need for each regional grant project to develop a three-tiered Staff Development Model that would serve as the framework for the roll-out of state initiatives.

Both MNCESR and WMPER developed respective three-tiered plans and submitted them to the Montana OPI Division of Indian Education for approval in the spring of 2006. A review of the archived documents of MNCESR, the Montana OPI approved its plan that identified Level 1 - Attitudes, Level 2 – Knowledge and Resources, and Level 3 – Sustainability (MNCESR archive, October 5, 2006). The Montana OPI continued to work with both regional grants to refine and edit this three-tiered professional development plan, and eventual approved and released the plan as outlined in Table 2. Next, the Montana OPI communicated to the two regional MPDP grants that "each region had until January 2008 to have 100% of the regions' teachers, administrators, school board members, aides, and support staff trained in level one Indian Education for All" (A. McMilin, personal communications, June, 15, 2006).

Table 2
The Three-Tiered Professional Development Plan for Indian Education for All

Level	Description
Level One - Awareness	Participants learn the obligation of Indian Education for All and what is meant by Indian Education for All. They also receive a brief history of Montana Indian Education for All and a basic understanding of Montana Indian people.
Level Two - Implementation	Participants learn various infusion models and strategies through lesson planning, project development, and continued conversations regarding literature and other resources.
Level Three - Sustainability	Schools identify key personnel who work with coaches to continue ongoing lesson planning and implementation.

Source: M. Jetty, personal communications, October 2006.

In 2008, the MNCESR and WMPER regional grants were asked to submit reports as part of it end of year reports to the Montana OPI, and in these reports the educational service regions were asked to provide information pertaining to the kinds of trainings provided, the number of educators trained, and the general perceptions of teachers about administrative support. Montana OPI's directions for the report stated: "The Bottom Line: Will the data gathered give you a solid indication as to whether, and to what degree your training model was successful…what changes are needed in the training model" (A. McMilin, personal communications, April 2008).

As illustrated by these communications, the Montana OPI was interested in determining the effectiveness of this Three-Tiered Professional Development Plan and began referring to it as the "Roll-Out" model. The strongest indication that the Montana OPI recognized the *organizational* effectiveness of this Three-tiered Roll-out Model was the decision to duplicate the process for the new Montana State Standards for Science in 2008. According to the Montana OPI (2008), this same model was the foundation for the three levels of training towards the new Science Inquiry initiative the state of Montana had just adopted. The model continues to be

duplicated by the Montana OPI for state roll-out initiatives, such as Gifted & Talented and Media Literacy. In 2011, Montana OPI revised the model for the roll-out of the Montana Common Core Standards for Mathematics and English Language Arts.

The development of the MPDP project has expanded to all five of the state's regions and each region is responsible for assisting the Montana OPI with the roll-out and the ongoing support of new state initiatives. The state requires the collection of open-ended responses and some basic anecdotal data as a result of these trainings.

Montana Indian Education for All as the Context for this Study

This study sought to identify the relationships that exist between a principal's leadership support and teacher concerns, about classroom innovations. Because professional development efforts and number of potential innovations is as diverse as the number of school districts in Montana, this study anchors itself in the one major state-wide initiative that all schools and educators have in common in Montana: Indian Education for All. Data collected was done within the context of the Montana Indian Education for All initiatives that the Montana OPI has supported for the last seven years.

This study also analyzed data within the context of the three-tiered professional development model that was co-developed by the Montana Professional Development Partnership project and the Montana OPI with the intent to add valid and reliable data to that which the state has collected regarding Indian Education for All.

Summary

This literature review focused on the three main components of the study: (a) the standards for staff development, (b) the process of adoption and implementation of school innovations, and (c) the Montana Indian Education for All state-wide initiative. The development

of the *National Staff Development Council's (NSDC) Standards for Staff Development* was first reviewed. Then, the evolution of the NSDC into the educational organization known as *Learning Forward* was described next, along with third edition of the standards. The literature review explored how other studies have utilized the NSDC standards and focused on six specific studies within the larger body of literature.

The second component of the study was explored through the lens of the models by which adoption and implementation of school innovations are viewed. The Concerns-Based Adoption Model (CBAM) along with the Stages of Concern (SoC) were described. The literature review described the development of the both the CBAM and the SoC, and then narrowed its focus on the SoC by explaining how it is used as a tool to measure an educator's level of concern about new, innovative programs that their school or district is engaged in. The interpretation of how the SoC signifies the educator's level of readiness to implement the new program in the classroom was explained, and how this is a key indicator by which administrators can determine the resources and further professional development needs of the staff regarding that innovation. Finally, the factors and processes that influence how new innovations permeate into the classroom were examined through the perspectives of the Diffusion Theory (Rogers, 2003) as compared to that of the Concerns Based Adoption Model (Hall & Hord, 1981).

The third and final component of the study, the Montana Indian Education for All mandate was described. The historical background of the 1972 Montana Constitutional mandate to recognize and infuse the distinct culture background of Montana American Indian Tribes into the education requirements was discussed. The issues of non-funding and lack of support for this mandate were discussed, along with the development of the Indian Education for All law that became a reality in the 1999 legislature. How the state funding lawsuits, and the final Sherlock

Decision (2004) led to the first-time funding of Indian Education for All mandates as a part of the 2005 legislature was explored.

Finally, The Montana Professional Development Partnership grants that teamed-up with the Montana OPI Division of Indian Education were reviewed, which led to the development of the three-tiered professional development model to support state-wide efforts of implementation. The context of the study was identified and set within the progression of the Montana Indian Education for All innovation for the intent of adding valid and reliable data to the growing needs of Montana's administrators and policymakers.

In the next chapter, the methodology by which the three major components were brought together in this study is outlined. Further details about both the NSDC's Self-Assessment Inventory and the Stages of Concern Questionnaire, including the validity and reliability of each tool, is explored.

Chapter Three - Methodology

This chapter describes the methodology for this dominant-less dominant mixed-methods study. The rationale for the survey design is provided (Creswell, 1994). The five research questions are explained, and the eleven hypotheses and the related null hypotheses are listed. The four variables identified for the study are outlined, and each measurement and survey tool that were utilized is discussed. Data collection procedures, the population, and the sampling process are explained. Next, the rationale for the use of open-ended questions to augment the survey is provided. The data analysis and the *a priori* assumptions are outlined. Finally, the relationship of the hypotheses to each of the five research questions are outlined and described.

The methodology used for this study is a non-experimental survey design. A Spearman's *rho* was utilized to identify relationships among the specific variables. According to Creswell (1994), researchers have two types of quantitative methodologies to choose from: a) the non-experimental survey design; and b) the experimental cause-and-effect design. Fowler (1988) defined a survey design methodology as one that will provide a quantitative or numeric description of some fraction of the population, which will enable them to generalize the results of the sample to the population. Therefore, the purpose of the survey research method is to generalize from a sample to a population so that inferences can be made about some characteristic, attitude, or behavior of this population (Babbie, 1990).

A survey design was chosen because of the advantages that it provides. Creswell (1994) noted that survey designs have the advantages of having a smaller cost, a quicker turn around for data collection and analysis, and the ability to generalize to the population from the smaller group of individuals in the sample.

Surveys were distributed and collected through an online survey tool (www.surveymonkey.com) as a means to minimize costs and to allow for a fast turnaround. An additional convenience associated with this strategy is its availability to the participants in a digital format. Notifications and follow-up reminders were emailed to participants, as described later in Chapter Three.

Research Questions

This study utilized one overarching research question and four supporting research questions to identify the relationships between the principals' levels of leadership in supporting Indian Education for All professional development and the outcomes that are representative of teachers' implementation. The answer to this first research question was further informed by the answers to the research questions two thru five. The five research questions are:

1 – What is the relationship between a principal's support for professional development and the teacher's implementation of the mandated state-wide innovation Indian Education for All?

2 - Which variable has the stronger relationship to the teacher's Peak Stage of Concern about the Indian Education for All innovation, the Leadership Subscale score, or the highest level of Indian Education for All training completed by the teacher?

3 - Which variable has the stronger relationship to the teacher's amount of time spent implementing Indian Education for All, the Leadership Subscale Score or the highest level of Indian Education for All training completed by the teacher?

4 - Which variable has the stronger relationship to the teachers' Peak Stage of Concern about the Indian Education for All innovation, the principal's Peak Stage of Concern about the

Indian Education for All innovation or the highest level of Indian Education for All training completed by the principal?

5 - Which variable has the stronger relationship to the teachers' amount of time spent implementing Indian Education for All in the classroom, the principal's Peak Stage of Concern about the Indian Education for All innovation or the highest level of Indian Education for All training completed by the principal?

Hypotheses

Data from eleven hypotheses informed the research questions. These are non-directional hypotheses for two reasons. The first is to limit any preconceived notion that administrator support for Indian Education for All, in general, was either positive or negative. Second, was the exploring of all relationships to identify which administrative actions improved success, or which actions inhibited implementation. The null hypotheses will follow right after each respective hypothesis listed.

The first research hypothesis is:

H_1 - There is a relationship between the Leadership Subscale score and the teachers' Peak Stage of Concern about the innovation.

The first null hypothesis is:

H_o - There is no relationship between the Leadership Subscale score and the teachers' Peak Stage of Concern about the innovation.

The second research hypothesis is:

H_1 – There is a relationship between the Leadership Subscale score and the amount of time the teacher spent implementing Indian Education for All in the classroom.

The second null hypothesis is:

H_o – There is no relationship between the Leadership Subscale score and the amount of time the teacher spent implementing Indian Education for All in the classroom.

The third research hypothesis is:

H_1 – There is a relationship between the Leadership Subscale score and the highest level of Indian Education for All training completed by the teacher.

The third null hypothesis is:

H_o – There is no relationship between the Leadership Subscale score and the highest level of Indian Education for All training completed by the teacher.

The fourth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the teacher and the teachers' Peak Stage of Concern about the innovation.

The fourth null hypothesis is:

H_o – There is no relationship between the highest level of Indian Education for All training completed by the teacher and the teachers' Peak Stage of Concern about the innovation.

The fifth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the teacher and the amount of time the teacher spent implementing Indian Education for All in the classroom?

The fifth null hypothesis is:

H_o – There is no relationship between the highest level of Indian Education for All training completed by the teacher and the amount of time the teacher spent implementing Indian Education for All in the classroom?

The sixth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the teachers' Peak Stage of Concern about the innovation.

The sixth null hypothesis is:

H_o – There is no relationship between the highest level of Indian Education for All training completed by the principal and the teachers' Peak Stage of Concern about the innovation.

The seventh research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the amount of time the teacher spent implementing Indian Education for All in the classroom.

The seventh null hypothesis is:

H_o – There is no relationship between the highest level of Indian Education for All training completed by the principal and the amount of time the teacher spent implementing Indian Education for All in the classroom.

The eighth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the highest level of Indian Education for All training completed by the teacher.

The eighth null hypothesis is:

H_o – There is no relationship between the highest level of Indian Education for All training completed by the principal and the highest level of Indian Education for All training completed by the teacher.

The ninth research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the teachers' Peak Stage of Concern about the innovation.

The ninth null hypothesis is:

H_o – There is no relationship between the principals' Peak Stage of Concern about the innovation and the teachers' Peak Stage of Concern about the innovation.

The tenth research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the amount of time the teacher spent implementing Indian Education for All in the classroom.

The tenth null hypothesis is:

H_o – There is no relationship between the principals' Peak Stage of Concern about the innovation and the amount of time the teacher spent implementing Indian Education for All in the classroom.

The eleventh research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the highest level of Indian Education for All training completed by the teacher.

The eleventh null hypothesis is:

H_o – There is no relationship between the principals' Peak Stage of Concern about the innovation and the highest level of Indian Education for All training completed by the teacher.

Variables

For this study the four variables were: (a) the principals' and the teachers' highest Stages of Concern about the innovation of Indian Education for All; (b) the principals' and teachers' highest level of Indian Education for All training completed; (c) the teachers' amount of time spent implementing Indian Education for All in the classroom; and (d) the Leadership Subscale Score for administrative support of the innovation. Table 3 presents further information related to the four variables.

In correlational studies, variables can either be influenced or do the influencing. Mertler and Charles (2002) differentiated this relationship by explaining that the variables can be either the predictor variable or the criterion variable. They defined the criterion variable as "the variable that one attempts to predict" (p. 380) or in other words the variable being influenced, while the predictor variable is "the variable used in attempting to predict the criterion variable" (p. 380). In this study, the variables might be one or the other depending on the relationship being explored by the hypotheses.

Table 3

The Characteristics of the Four Variables for the Research Study

Variable	Description	Source of Data	Level of Data
Peak Stage of Concern (SoC)	Data from the survey will indicate the highest level of concern on Seven Levels: Unconcerned – 0; Informational – 1; Personal – 2; Management – 3; Consequence – 4; Collaboration – 5; Refocusing - 6	Data collected from the Stages of Concern Questionnaire (SoCQ)	Ordinal
Leadership Sub-Scale Score	Each of the seven questions are answered with the following scale: Always – 4; Frequently – 3; Sometimes – 2; Seldom – 1; Never – 0.	Data collected from the seven questions from the Leadership Standard on the Learning Forward Self-Assessment Inventory 2 (SAI2).	Ordinal
Levels of IEFA Training (IEFA-Ls)	The three levels of IEFA training are defined and indicated by: No Training, Level 1, Level 2, or Level 3. Participants mark the highest level attained.	Participants indicate on the demographics portion of the survey.	Ordinal.
Amount of Time Implementing IEFA	With regard to IEFA implementation, estimate the number of hours you spend with your students in the classroom per week: Zero Hours; 1 to 5 Hours; 6 to 10 Hours; 11+Hours	Participants indicate on the demographics portion of the survey.	Ordinal.

Population and Sample

This study utilized a cross-sectional sample. "The population is composed of all individuals of interest to the researcher" (Cozby, 2007, p. 138). The population for this study was all teachers and administrators in Montana K-6 public schools with at least 10 certified staff members. The K-6 criteria was chosen instead of a K-12 criteria because of the additional variables that departmentalization within secondary schools introduces. In other words, there is a greater consistency found in instructional requirements for K-6 teachers across schools. The Montana Office of Public Instruction's data were accessed, and in the 2013 school year there are 151 schools that met the inclusionary requirements of this study. This population consists of the various grade-level configurations (i.e. K-2, 3-4, K-5, K-8) that exist in the state, but does not include any school with less than 10 certified teaching staff.

For a certain portion of this study's data analysis, teacher and principal data needed to be grouped accordingly. Hoy & Clover (1986), explain that only schools with ten or more teachers should be considered for the sample when data grouping is needed to be representative of the school climate. The same rationale applies to teacher perception data that is meant to be representative of their respective administrator. "Since the unit of analysis was the school, individual data were aggregated" (Hoy & Clover, 1986, p. 98)… "the results confirmed the expectation that collegial behavior can be conceived as an organizational property rather than an individual one" (Hoy & Clover, pp. 102-104).

The study utilized a single-stage random quota sampling design. Creswell defines the single-stage sampling design as: "one in which the researcher has access to names in the population directly" (1994, p. 119). As already mentioned, it was first determined how many K-6 schools to be included in the population. The recommended sample size was determined with a

margin of error set at 5% and a 95% confidence interval to be 109 schools with a 50% response distribution (www.raosoft.com/samplesize.html). Then each school in the population was identified with a unique code. Finally, a random number generator was used to ensure that schools were randomly selected from the list of 151 schools. This study used a random quota sample, so that when contact with a school was unsuccessful, or permission was not granted to proceed, the next randomly selected school code was selected.

Of special note, this study's original proposal intended to utilize a stratified random sample based on the five regional education service agencies (RESA) within the state of Montana. As discussed in Chapter Two, the State of Montana is split into five Regional Educational Service Agencies (RESAs): Region 1 – Prairie Educational Service Area (PESA); Region 2 – Montana North Central Educational Service Region (MNCESR); Region 3 – Montana regional Educational Service Area 3 (MRESA3); Region 4 – Regional Education Service Area 4 You (RESA4U); and Region 5 - Western Montana- Comprehensive System of Personnel Development (WM-CSPD). However, the percent of the distribution of the schools within the population among these five regions was determined, and then this percentage was associated to the number of schools needed from each region for the sample (Table 4). As Table 4 reports, the actual distribution of the 81 schools that permission was granted to conduct the research did not match the necessary distribution to allow for the study's results to be generalized to the regions. As a result of this difference, the study was not conducted in this method, but instead conducted a random sample based on the state as a whole.

Table 4

Distribution of the Population and Sample by Regional Education Service Agency (RESA)

Region No.	Regional Educational Service Agencies	Number of Schools in Population N= 151 (% of Total Population)	Number of Schools in with permission to contact (% of Potential Sample)
1	PESA	22 (14%)	10 (12%)
2	MNCESR	31 (21%)	32 (39%)
3	MRESA3	32 (21%)	11 (14%)
4	RESA4U	31 (21%)	15 (19%)
5	WM-CSPD	35 (23%)	13 (16%)
Total		Total 151 (100%)	Total 81 (100%)

Data Collection Procedures

The responses submitted by the teachers and principals during this study were kept confidential, and procedures were utilized to prevent individual identification. Each school, principal, and teacher was designated by a unique code that was accessed only by the researcher. Data were stored, separate and secured, from the key code in a locked facility. The key to the coding system was destroyed, shortly after the study had been completed.

The participant consent form was conducted electronically as part of the online survey's instructions. Participants were notified by email with an invitation to voluntarily complete the online survey. The superintendent of each randomly selected school in the sample was contacted by email with a short description of the study and an invitation to participate. The invitation asked for one of three responses: (a) No thanks, we are not interested at this time; (b) Yes, we will participate, you have permission to contact the principal and teachers; or (c) Yes, we are interested, but we will need board approval first. Once the superintendent's permission to

proceed was received, the next step was to contact the school's principal to complete the online survey, and to give them two options for the teacher sample: (a) principal forwards the invitation and survey link directly to the teachers; or (b) principal sends teachers' emails directly to researcher. It is recommended that for online surveys that two reminder emails should be sent in one week intervals starting from the date of the first contact (Heerwegh, 2005; Wang, 2011).

Measurement and Instruments

The Leadership Subscale of Learning Forward's Standards Assessment Inventory 2 (SAI2) was utilized to obtain information about the levels of administrative support for professional learning efforts in a school. Appendix B (p. 185) displays the seven of the SAI2 questions that were used for this study. The Stages of Concern Questionnaire (SoCQ), from the Concerns Based Adoption Model, was utilized to obtain information about the current Peak Stage of Concern an educator has regarding their implementation of the Indian Education for All innovation. Appendix B (pp. 177-181) displays the entire 35 questions from the SoCQ.

A number of open-ended questions augmented information collected for both surveys. Additional open-ended questions were utilized to further inform the amount of time being used for Indian Education for All implementation in the classroom, and the highest level of Indian Education for All training that an educator has completed.

The Standards Assessment Inventory 2 (SAI2)

A portion of the SAI2 was used to collect data pertaining to the Leadership subscale. The intent of the Standards Assessment Inventory is to measure the degree to which a school's professional development program aligns to the standards for quality professional learning. In 2004, The National Staff Development Council (NSDC) and the Southwest Educational Development Laboratory (SEDL) published the first edition of Standards Assessment Inventory

(SAI) as a means to develop a reliable and valid staff development assessment instrument aligned with NSDC's standards for quality professional development. The SAI (2004) consisted of five questions for each of the 12 subscale standards for a total of 60 questions. This study only used the seven questions that align with the Leadership Subscale.

According to NSDC (2004), the intended use of the SAI and its relationship to each individual standard is for improving the professional development practices of schools. According to Hord (2011) the whole intent of establishing the validity and reliability of each subscale separate from the holistic score, was to identify the strengths and weaknesses that a school had accordingly to the standards themselves. "The only way that schools could move forward with any confidence to improve the areas identified to be weaknesses by the SAI was to establish the reliable and valid use of each subscale on its own" (S. Hord, personal communications, August 4, 2011).

As discussed in Chapter Two, under the new name of Learning Forward, the third edition of the standards were published and renamed the Standards for Professional Learning (2011). This new revision restructured the twelve standards into seven. According to Denmark & Weaver (2012), the recent publication of these revised standards "necessitated a redesign of [SAI]" (p. 3), and Learning Forward commissioned an independent process and psychometric evaluation. Now known as the Self Assessment Inventory 2 (SAI2), the validity and reliability of this updated evaluation tool has been determined by a recent pilot study, which is discussed later in the chapter.

Survey questions, SAI2.

This study utilized just one of the seven subscales, the Leadership Subscale, of the Learning Forward Standards for Professional Learning (2011) and the correlated questions from

the SAI2 (2012). "The use of just the Leadership questions for this study does not impact the validity and reliability of the SAI2 survey tool" (S. Hirsh, personal communications, January 10, 2013). Administrators and teachers will complete seven survey questions from the Leadership Standard subscale, marking a response which most accurately reflects their professional learning experiences in their schools. Participant responses include the following five-point Likert scale: (a) Never – 0; (b) Seldom – 1; (c) Sometimes – 2; (d) Frequently – 3; (e) Always – 4. The seven questions are found in Part 3: Leadership Support for Professional Learning (Appendix B).

Validity and reliability of SAI and SAI2.

The validity and reliability of the SAI survey instrument has been determined through various psychometric studies that are discussed in this section. The survey has been refined since its original development and publication in 2003, but there are only two versions to note: the original SAI (2003) and the SAI2 (2011).

In 2003, NSDC and SEDL commissioned three pilot studies of the original SAI instrument. Each pilot study included 20 schools, totaling 60 schools and hundreds of educators. SEDL conducted the pilot studies by collecting, entering, organizing and analyzing the data. Reliability and validity measures were calculated after each pilot to begin establishing the psychometric properties of the new instrument. Vaden-Kiernan, Jones, and McCann (2009) found the Cronbach's alpha coefficient for the overall holistic SAI score was 0.98 for all three pilot studies (p. 12).

As discussed earlier, the developers were interested also in the validity and reliability of how the SAI measured each of the twelve standards, and refer to their measures as the subscales. Each subscale can be used separately based on its own established reliability and validity measures. Relevant to this study, the Cronbach alpha coefficients for the Leadership subscale

were determined to be: Pilot Study #1 – 0.84; Pilot Study #2 – 0.89; Pilot Study #3 – 0.85 (SEDL, 2003, p. 3).

Findings of the pilot studies established the following known properties: (a) instrument reliability was consistent and high across all three pilot studies for the overall scale, and consistently good for all 12 subscales; (b) The instrument demonstrated good content validity through the process of soliciting expert advice on the instrument's clarity and relevance to the characteristics of each of the standards and to the experience of school faculties; (c) Criterion-related validity was supported, indicating the teacher ratings of their school's professional development program alignment with the NSDC standards were comparable to ratings of their school by experts. SEDL (2003) concluded: "The analysis of the psychometric soundness of the standards assessment instrument indicate that it is a reliable and valid measure of the degree that school's professional development programs reflect the NSDC standards" (p. i).

From the internal critique, SEDL noted some concerns from the study. These concerns included a lack of strong support for the construct validity for a 12-factor model, as suggested by the NSDC Standards (2001). Findings suggested overlap within the 12 instrument subscales. At the time, SEDL identified that further examination was warranted and began to suggest a revision of the standards. "Regarding construct validity, issues about the number of standards or factors may warrant further attention" (SEDL, 2003, p. i).

In 2011, after the publication of the revised standards, Learning Forward commissioned an independent redesign and psychometric evaluation, with an additional set of independent external reviewers for further feed-back. Denmark & Weaver (2012) describe the two phase process as follows: Phase 1 began with the construction of a crosswalk between the original 60 questions from SAI to the new standards, which led to a revised draft of the tool that was then

piloted by 82 practicing educators in the field (p. 3); and Phase 2 which was a large scale pilot of the new survey tool that included 2,325 respondents from 121 schools, with the purpose "to examine the construct validity, the predictive validity, and the reliability of the SAI2" (p.7).

Denmark & Weaver (2012) report that the results from the psychometric analysis are as follows: validity of the Leadership subscale was measured using a model fit test, and resulted in a chi-square score of 84.36 and a Comparative Fit Index (CFI) score of 0.998; and the reliability coefficient for the Leadership subscale was 0.98.

CBAM and Stages of Concern

As discussed in more detail in Chapter Two, the Stages of Concern (SoC) are part of a set of tools from the Concerns-Based Adoption Model (CBAM), which focuses on an individual person's concerns about innovative changes. Based on earlier work done by Fuller (1969), which identified three phases of concern: (a) the Preteaching Phase, which was associated with a general sense of *Nonconcern*; (b) the Early Teaching Phase, which identified with a *Concern With Self*; and (c) the Late Teaching Phase, which represented the general characteristic of experience know as *Concern With Pupils*. Fuller's research focused on teacher concerns in general and concluded that these concerns were a natural sequence that developed as their career progressed.

The Concerns Based Adoption Model (CBAM) research was focused on teacher concerns who were involved in the adoption of some new innovation. CBAM was published by Hall, Wallace, and Dossett (1973), and identified seven stages of concern about the innovation as outlined in Appendix C. The term *concern* is defined as "the composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task" (Hall, George, & Rutherford, 1979, p. 5).

As described in Chapter Two, and illustrated in Appendix C, the seven Stages of Concern are broken into four categories: (a) Unconcerned; (b) Self; (c) Task; and (d) Impact. Hall and Hord (2011) identified that when an individual's peak concern have reached Stage 3 – Task (Management), this is when the innovation is used for the first time (p. 76), and that the ideal peak stage of concern for implementation leaders to aim for is Stage 4 – Consequence and Stage 5 – Collaboration when the innovation is having its greatest "Impact" on the classroom (p. 82).

The Stages of Concerns Questionnaire, SoCQ.

After the publication of the Stages of Concern, extensive work began to develop an instrument that could be utilized to assess someone's current stage of concern. According to George, Hall, and Stiegelbauer (2008), the three years worth of work (1973-1976) developed a quick-scoring questionnaire and an open-ended survey for individual written responses.

For this study, principals and teachers completed the 35 question Stages of Concern Questionnaire (SoCQ), marking a response which most accurately reflects their present concerns about the Indian Education for All implementation in their schools. The full 35 questions of the survey is found in Part 1: Concerns about Indian Education for All (Appendix B, pp. 177-181).

For each of the 35 questions, participants respond accordingly based on the degree of intensity from 0 to 7 on how each statement relates to them at that moment. This scale is divided into four possible categories of intensity: Irrelevant; Not true of me now; Somewhat true of me now; and Very true of me now. There are also varying degrees of intensity within three of the four categories. As a result, possible responses include the following: (a) Irrelevant – 0; (b) Not true of me now – 1 or 2; (c) Somewhat true of me now – 3, 4, or 5; (d) Very true of me now – 6 or 7.

Validity and reliability of the SoCQ.

According to George, Hall, & Stiegelbauer (2008), after the initial development of the SoCQ, several studies of the instrument's validity and reliability were conducted from 1973-1976. The CBAM staff conducted pilot studies on 11 different innovations. Reliability and validity measures were calculated after the SOCQ was used for these cross-sectional and longitudinal studies.

Findings of the initial pilot studies (Hall, Wallace, & Dossett, 1973; Newlove & Hall, 1976) established the following known properties: (a) instrument's internal reliability was high across all studies, even four studies that focused on nonteaching applications; and (b) The instrument demonstrated high levels of validity through correlation scores between a participant's highest SoC stage rankings on the paper-pencil test and the ranking on the open-ended interview. George, et al. (2008) concluded: "that the SoCQ accurately measures the Stages of Concern About an Innovation" (p. 12). After these initial internal studies by the CBAM staff, the SoCQ would undergo numerous external tests for validity and reliability (Barucky, 1984; Hall, George, & Rutherford, 1979; Hall, Newlove, Rutherford, & Hord, 1991; Jordan-Marsh, 1985; Kolb, 1983; Martin, 1989).

George, Hall, & Stiegelbauer (2008) explained that the validity of the SoCQ was established using correlation matrices and factor analysis as outline by Cronbach and Meehl (1955) and Guttman (1957). The correlation coefficients of 0.83 for Stage 0, 0.67 for Stage 1, 0.72 for Stage 2, 0.91 for Stage 3, 0.96 for Stage 4, 0.82 for Stage 5, and 0.88 for Stage 6 illustrate high correlation (George, et al., 2008, p. 15). The SoCQ instrument's internal reliability was originally tested by establishing the alpha coefficients based on two measures: the degree of reliability among items in terms of overlapping variance; and test-Retest reliability. The

coefficients for the overlapping variance are 0.64 for Stage 0, 0.78 for Stage 1, 0.83 for Stage 2, 0.75 for Stage 3, 0.76 for Stage 4, 0.82 for Stage 5, and 0.71 for Stage 6. The coefficients for the test-retest are 0.65 for Stage 0, 0.86 for Stage 1, 0.82 for Stage 2, 0.81 for Stage 3, 0.76 for Stage 4, 0.84 for Stage 5, and 0.71 for Stage 6.

According to Pallant (2007), the interpretation of a Cronbach Alpha value is that anything with a correlation coefficient greater than 0.7 are acceptable (p. 98). George, et al. (2008) concluded that this analysis provided CBAM staff with the evidence needed to infer that the seven scales (0-7) are accurate independent constructs that help identify with an individual's concerns about an innovation.

The Indian Education for All Levels of Professional Development

Principals and teachers were asked to answer two questions regarding the level of Indian Education for All professional development they have participated in. Participants provided this data while answering questions within Part 2: Demographics section:

- Have you received formal training in Indian Education for All? Yes __ no _
- If yes, which levels have you completed? Level 1___ Level 2___ Level 3___
    - See Appendix B (pp.178-179) for format and descriptions of levels

The Amount of Time Implementing or Supporting Indian Education for All

Teachers were asked three questions to report estimated time per week of Indian Education for All implementation in their classroom, while principals' estimates were based on support within their school building. Participants provided this data while answering questions #7-9 of the demographics section (Appendix B, pp. 177-178):

- How long have you been involved in implementing Indian Education for All?

  Never ___ 1 year ____ 2 years ____ 3 years ____ 4 years ___ 5 years or more ____

- With regard to IEA implementation, estimate the time you spend with your students:

  Zero hours _____ 1 to 5 hrs _____ 6 to 10 hrs _____ 11+ hrs _____

- In your use of Indian Education for All, do you consider yourself to be a:

  Non-user ____ novice ____ intermediate user ____ old hand ____ past user _____

Demographics

Administrator and Teacher Demographic data collected included: Gender; Age (Categorical – 20-29, 30-39, 40-49, 50-59, and 60+); Total Years of Teaching Experience; Total Years as Administrator; Number of Years at Present School; and Highest Degree Earned. (see Part 2: Demographic questions #1 to 6, Appendix B, p. 177)

Concerns for other recent innovations.

The SoCQ includes two additional questions regarding other potential major innovations that may have an effect on the current SoC of the participant. Participants provided these data while answering questions in part 2: Demographics section:

- Are you currently in the first or second year of use of some major innovation or program other than Indian Education for All? Yes _____ no _____
- If yes, please list the innovation you are implementing:

Open-Ended Questions

The SAI2 and the SoCQ are Likert scale response surveys that utilize a structured closed-ended approach. Schwarz (1999) described how the results of open-ended questionnaires can yield very different responses to those from a closed-ended questionnaire even though the topic of question was identical. Other researchers have identified that it is sound practice to use open-ended questions to confirm teacher and administrator responses (Guskey, 2000; Hall & Hord,

2011; Newlove & Hall, 1976). Because of these factors, this study complimented the dominant quantitative paradigm with a less dominant qualitative paradigm.

This study is a dominant-less dominant mixed methods design utilizing a quantitative survey, while simultaneously utilizing a few embedded qualitative questions. Creswell (1994) explained that the dominant-less dominant design is when the study utilizes one single, dominant paradigm with one small component of the larger study being from the alternative paradigm (p. 184). "A classic example of this approach is a quantitative study…with a small qualitative interview component in the data collection phase" (Creswell, 1994, p. 177).

A total of seven open-ended questions were used (four to augment in terms of the SoCQ and three to augment the SAI2) in this study to further enhance the findings. Cozby (2007) stated: "open-ended questions are most useful when the researcher needs to know what people are thinking and how they naturally view their world" (p. 130). "This combination of closed and open-ended questions is particularly useful…as it gives an indication of whether the defined response categories adequately cover all the responses that respondents wish to give" (Pallant, 2007, p. 9).

For this less dominant qualitative portion, the digital survey was set-up as a textbox limited to 100 words per question. The following open-ended questions for the SoCQ and the SAI2 are presented as follows.

SoCQ Open-Ended Questions

The following four open-ended questions were used for both teachers and administration, as a means to inform relationships found between teacher and administrator concerns:

1) When I think about implementing Indian Education for All in my classroom/school, I am most concerned about….

2) How does Indian Education for All implementation affect student learning in your classroom/school?

3) How has Indian Education for All implementation in your classroom/school affected you as a teacher (as an administrator)?

4) What kind of support is needed in order to continue to implement Indian Education for All in your classroom/school? Please be specific.

These four open-ended questions were used to provide additional data regarding the various concerns by both the teacher and the administrator.

SAI2 Open-Ended Questions

The following questions (three for principals and three for teachers) were used for teachers and administrators to augment the leadership survey questions from the SAI2. These questions were created based on the three core elements of the Learning Forward Leadership Standard (2011), which identifies the need for school leaders who develop capacity, advocate, and create support systems for professional learning in their schools (p. 61).

The teacher questions focused on the leadership support of their principal, while the administrator questions were a self-evaluation.

Principal Questions:

1) Core Element #1 - In general, what have you done to advocate for Indian Education for All professional learning in your school?

2) Core Element #2 - What are the support systems and structures you have created for Indian Education for All implementation in your school? Please be specific.

3) Core Element #3 - What have you done to develop your own knowledge and capacity to lead Indian Education for All implementation in your school? Please be specific.

Teacher Questions:

1) Core Element #1 - In general, what has your principal done to advocate for Indian Education for All professional learning in your school?

2) Core Element #2 - What are the support systems and structures your principal has created for Indian Education for All implementation in your school? Please be specific.

3) Core Element #3 - What has your principal done to develop teacher capacity for learning about Indian Education for All and its implementation in your school? Please be specific.

To conclude, the rationale for the addition of this less dominant qualitative portion of the study, Cozby (2007) noted that open-ended questions can "yield valuable insights into what people are thinking" (p. 130). By using these open-ended questions, this study enhanced the results from the quantitative portion of the survey. The analysis of theses open-ended questions are addressed in the next section.

Data Analysis

The analysis moved from the macro to the micro perspective. Overall, there were three stages to the analysis: (a) Stage 1 – consisted of the preliminary analyses that checked for data assumptions, reported on the distributions (Mean, SD), and reported the error of variance; (b) Stage 2 - A Spearman's *rho* correlation was used to determine the strength of the relationship and analyze significance and effect sizes, and investigated the interaction effects, as well as the

main effects; and, (c) Stage 3 – analyses of the qualitative data, which investigated patterns and themes within the survey data and responses from the open-ended questions.

The Stage 1 preliminary analyses included two parts: (a) what Creswell (2009) identified as the report of returns and non-returns of participates in the sample; and (b) the Descriptive Analysis (Cozby, 2007; Creswell, 2009) which examined the central tendencies (mean, median, mode), and the variability (standard deviation) for the continuous data, while the frequencies and percentages were examined for categorical data.

The Stage 2 correlation analysis utilized a Spearman's *rho* correlations. In using SPSS, there are two parts to this analysis as outlined by Pallant (2007) for correlations. The first part of the analysis includes the creation of a scatter plot to check for possible violations of the assumptions of linearity and homoscedasticity (p. 127). Pallant (2007) outlined the three steps needed: (a) checking for outliers; (b) inspecting the distribution of data points; and (c) determining the direction of the relationship between the variable (pp. 128-129). The second part as outlined by Pallant (2007) is the interpretation of the SPSS output from the correlation, and also includes three steps: (a) determining the strength of the relationship; (b) calculating the coefficient of determination, or effect size using r-squared; and (c) assessing the significance level (pp. 132-133).

Lastly, the Stage 3 analysis of the qualitative data investigated patterns and themes within the participant's responses to the open-ended questions. Several researchers have proposed qualitative analysis to guide the reduction, display, and interpretation of data (Creswell, 2009; Marshall & Rossman, 1989; Miles & Huberman, 1994). The participant's responses to the seven open-ended questions were coded into categories and themes and reported, utilizing matrices.

The *a priori* assumptions

The *a priori* assumptions addressed for this study were: (a) population normality; (b) levels of data; (c) alpha level for statistical significance; and (c) the direction of the relationship.

a) Population Normality – The population's distribution of scores were examined for levels of normality using histograms and scatter plot techniques within SPSS. The assumption for this study applies the central limit theorem, and uses a sample size of 30+, which Pallant (2007) explains will reduce problems in the analysis that maybe a result of violating the assumptions of a normal population (p. 204).
b) Levels of Data – because both the SoCQ and the SAI2 utilize a Likert-scale that determines the participants' perceptions, this study treated these data as ordinal. Therefore, this study utilized a Spearman's *rho* correlation.
c) Alpha Level of Significance – an *a priori* alpha level of $\leq .05$ was used to determine statistical significance.
d) Direction of Relationship – the hypotheses for this study are of a non-directional nature. Therefore, a two-tailed analysis was conducted.

As a result of the main analyses, relationships were closely examined that met the alpha level criterion for statistical significance ($p \leq .05$).

Testing the null hypotheses and applying results to the research questions

After the data analysis stages were completed, the results were used to test the null hypotheses and applied to the research questions. To do this, the calculation of the coefficients and the alpha level criterion thresholds determined *a priori*, assisted in the test of the null hypotheses. Then the analysis of the results from the testing the null were applied to the research questions themselves as described next, and is reported in Chapter Five.

As described earlier, this study utilized one overarching research question and four supporting research questions to identify the relationships among the variables. The specific application of the hypotheses in relationship to Research Question #1 is described in Table 5. This study examined the question within the relationships posed by nine hypotheses. The correlation coefficients are reported.

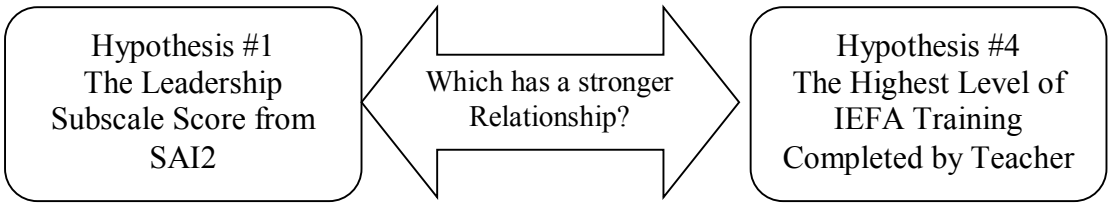
Table 5
The Relationships Examined by Research Question #1
What is the relationship between a school leader's support for professional development and the teacher's implementation of the mandated state-wide innovation Indian Education for All?

	The Leadership Subscale Score from SAI2	Administrator's Highest Level of IEFA Training Completed	The Administrator's Peak Stage of Concern for the Innovation
Teacher's Peak Stage of Concern for the Innovation	Hypothesis #1	Hypothesis #6	Hypothesis #9
Teacher's Time Implementing IEFA in the Classroom	Hypothesis #2	Hypothesis #7	Hypothesis #10
Teacher's Highest Level of IEFA Training Completed	Hypothesis #3	Hypothesis #8	Hypothesis #11

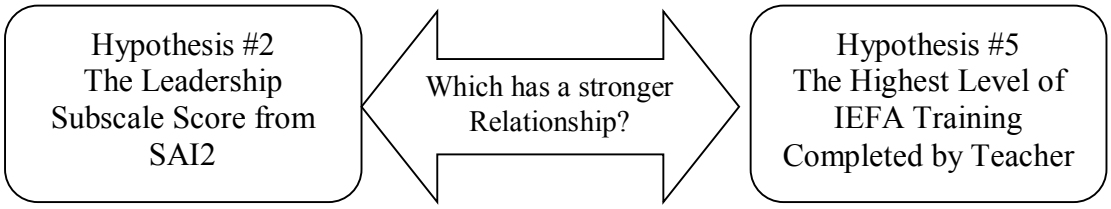
As explained earlier in the chapter, Research Question #1 was further informed by Research Questions Two thru Five. The context for these research questions was the comparison of correlation coefficients from two separate hypotheses. The purpose of these comparisons was to examine which variable has a "stronger relationship" with another commonly shared variable. The specific relationship examined within Research Questions #2 thru 5 is illustrated in Figure 1.

Figure 1 Relationships Examined by Research Questions Two thru Five

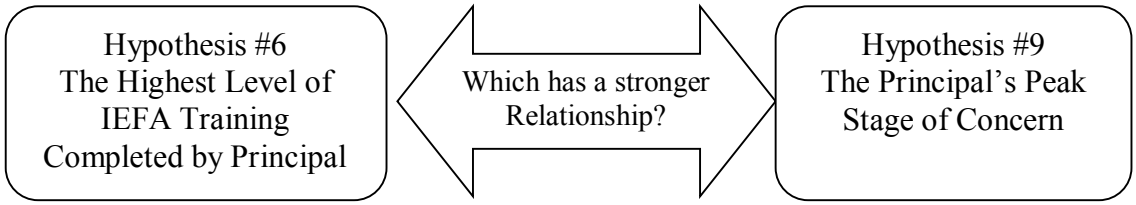
Research Question #2 - Relationship to the Teacher's Peak Stage of Concern



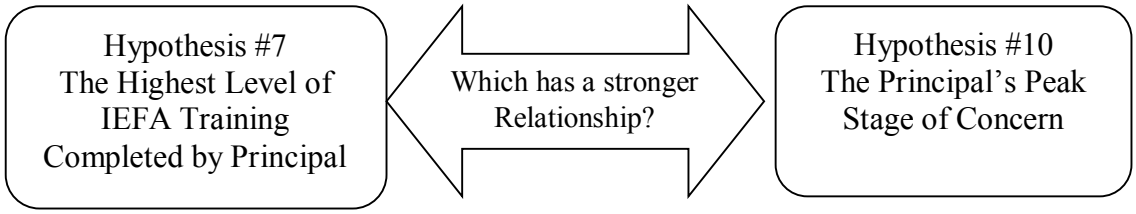
Research Question #3 - Relationship to the Amount of Time Implementing IEFA



Research Question #4 - Relationship to the Teacher's Peak Stage of Concern



Research Question #5 - Relationship to the Amount of Time Implementing IEFA



Summary

In summary, this chapter described the methodology for this dominant-less dominant mixed methods study. The structure of the non-experimental design was described, and the rationale for the survey design was provided. The five research questions were presented, and it was explained that one overarching research question guided the study. Research Questions Two through Five further informed the study. Next, eleven hypotheses and the related null hypotheses were listed.

The four variables identified for the study were outlined, which included the identification of the levels of data, the related Likert scales, and sources of data for the variables. The population was identified as being inclusive to all K-6 schools in Montana with at least 10 certified staff members with the total population of 151 schools that met this criterion. A random quota sample was utilized for the study.

The data collection procedures were described. The initial contact was made to each superintendent of schools within the sample for permission to conduct the study. This chapter described that the survey and participant consent was conducted online via Survey Monkey.

The chapter described each measurement and survey tool that was utilized, including the Stages of Concern Questionnaire (SoCQ) and the Self-Assessment Inventory 2 (SAI2). The validity and reliability of each instrument was outlined in detail. Next, the rationale was provided for the use of open-ended questions to augment the survey data. Seven open-ended questions provided additional insight respondents have about the state-wide mandate of Indian Education for All.

Finally, data analysis was outlined to include three stages: (a) preliminary analysis; (b) the main analysis; and (c) post hoc analysis. The *a priori* assumptions were provided, and the

main analyses were described. Each hypothesis was analyzed using a Spearman's *rho* correlation to identify relationships among the variables. Finally, the relationship of the hypotheses to each of the five research questions was outlined and described. In chapter Four, the results of the analysis is presented.

Chapter Four – Results

This chapter presents the results of the collected data for this dominant-less dominant mixed-methods study. This study's purpose was to examine data specific to principal and teacher perceptions of the leadership support for Indian Education for All professional development in their school. The data from each instrument were compared to (a) the administrators' and teachers' Peak Stage of Concern of the Indian Education for All innovation, (b) the highest Indian Education for All (IEFA) training level attained, and (c) the amount of time that administrators and teachers report spending on supporting and implementing Indian Education for All in their school and classroom.

Relationships were examined among the leadership support scores and the Peak Stage of Concern reported, the highest level of training completed, and the estimated amount of time of program implementation in the classroom. Comparisons of these four variables formed the basis of eleven hypotheses, which were designed to support five research questions. This study also examined if the level of leadership support, or the level of training received by teachers, had the strongest relationship to the Peak Stage of Concern. Additionally, this study determined which factor has a stronger relationship on the amount of time spent on implementing the Indian Education for All innovation in the classroom; the level of leadership support, or the level of training received by teachers.

This study was a non-experimental survey design, which applied a Spearman's *rho* to calculate the correlations among the specific variables in a more dominate quantitative methodology. Additionally, a less dominate qualitative portion of the survey utilized open-ended questions to allow for the participants to provide more information on the variables.

The Leadership Subscale of Learning Forward's Standards Assessment Inventory 2 (SAI2) was utilized to obtain information about the levels of administrative support for

professional learning efforts in a school. The Stages of Concern Questionnaire, from the Concerns Based Adoption Model, was utilized to obtain information about the current Peak Stage of Concern an educator has regarding their implementation of the Indian Education for All innovation. Demographic questions were utilized to collect the amount of time being used for Indian Education for All implementation in the classroom, and the highest level of Indian Education for All training that an educator has completed, as identified by the Montana OPI three-tiered training framework.

This chapter explains the data collection process and handling of the data. Results are presented in three main sections based on the structure of analysis: preliminary analysis; the correlations; and the open-ended questions. First, the preliminary analysis of the data is presented, including the population and sample, and the descriptive analysis of the demographics. Next, the correlation results are presented for each hypothesis and include results of the Spearman's *rho* coefficient and a two-tailed test of statistical significance. Finally, the results of the less dominate qualitative data collected from the seven open-ended questions are presented in their respective matrices. The relationships of the hypotheses to each of the five research questions are presented in Chapter Five.

Data Collection

After the schools that met the population criteria were identified, the superintendent of each randomly-selected school in the sample was contacted by email or phone with a short description of the study and an invitation to participate. The invitation asked for one of three responses: (a) No thanks, we are not interested at this time; (b) Yes, we will participate, you have permission to contact the principal and teachers; or (c) Yes, we are interested, but we will need board approval first. Once the superintendent granted permission, the school principal and

teaching staff were contacted to complete the online survey. Superintendent contacts were conducted between September 1 and October 2, 2013. Two reminder emails were sent in one week intervals starting from the date of the first contact to both superintendents and participants. The survey was made available to participants between October 1 and December 15, 2013.

The emailed invitation specified to participants that completion of the survey was completely voluntary. The participant consent form was conducted electronically as part of the online survey's instructions. Surveys were distributed and collected through an online survey tool (www.surveymonkey.com), with the option to request a hard copy by contacting the researcher.

Data Analysis

There were three stages to the data analysis for this study: (a) Stage 1 – Preliminary analyses; (b) Stage 2 - Correlations; and (c) Stage 3 – Analyses of the qualitative data. Prior to initiating the analysis stages, any issues with returned participant questionnaires were identified. Forty surveys were not included in the analysis due to incomplete data, mostly due to participants not continuing after the first part of the survey. Eight teacher surveys were complete, but did not have a proper invitation code. SurveyMonkey information was utilized to identify the IP addresses and match them to other participating schoolsm, for six of the eight instances. The other two teacher surveys were included in any analysis that did not need school groupings. Stages of Concern Questionnaire data were uploaded into the Southwest Educational Development Laboratory (SEDL) website to assist in generating the Peak Stage of Concerns for each individual participant, as well as the entire sub-group of teachers and principals. Finally, data were uploaded into SPSS for analysis.

The Stage 1 preliminary analyses included two parts: (a) the report of returns and non-returns of participates in the sample; and (b) the Descriptive Analysis which examined the central tendencies and the variability for any continuous data, and the frequencies and percentages for any categorical data. This stage also included reports of any descriptive comparisons between variables.

The Stage 2 correlation analysis utilized the Spearman's *rho* Correlations. The interpretation of the SPSS output from the correlation included three steps: (a) determining the direction of the relationship between the variables; (b) determining the strength of the relationship; (c) calculating the effect size using r-squared; and (d) assessing the significance level.

Lastly, the Stage 3 analyses of the qualitative data investigated patterns and themes within the participant's responses to the open-ended questions, and included steps that guided the reduction, display, and interpretation of the data. The participant's responses to the seven open-ended questions were coded into categories and themes and reported in Chapter Four utilizing matrices.

Stage One: Preliminary Analyses

Population and sample.

The population for this study was all teachers and administrators in Montana K-6 public schools with at least 10 certified staff members (N=151). The researcher utilized the Montana Office of Public Instruction's database, as well as school district webpages to identify which school met the criteria for inclusion in the population. In the 2013 school year there are 151 schools that met the inclusionary criteria of this study. The population consisted of schools with the various grade-level configurations (i.e. K-2, 3-4, K-5, K-8) that are present in the state.

Table 6 reports the statistics about the population. There were 151 schools that met the criteria to be included in the population. Of those 151 schools, there were 148 principals in the population due to three of those principals sharing a part of their full-time equivalency (FTE) in more than one school. There were 2,726 teachers representative of the 151 schools, and include Grades K-6 classroom teachers, the school's Health/PE teacher, and any Music/Art teachers. The researcher included any Special Education teachers who responded, but did not include all counselors determined by whether or not they had actual instructional duties in schools.

Table 6
Population Characteristics

Number of Schools that fit the criteria for inclusion in the population	Number of Principals in the Population	Number of Teachers in the Population	Number of schools that permissions was granted by superintendents to contact principals and teachers in the population
151	148	2726	81

Note.Some schools within a district may share a full-time principal.

Of the 151 schools, superintendent permission was granted to conduct the study within 81 schools. Table 7 reports that these 81 schools represented 53.6% of the population. A total of 79 principal survey invitations were sent, with two principals having supervision over two schools each. These 79 principals represent 53.4% of the total population of 148 principals. A total of 1,085 teacher survey invitations were emailed, which is representative of 39.8% of the 2,726 teachers that are in the population. Of the 79 principal invitations sent out, 41 surveys were completed, or a 51.9% return rate. The total number of completed teacher surveys was 316, which was a 29.1% return rate.

This study requires two different samples to be referenced. For the first five hypotheses, only teacher data were analyzed on an individual basis. The 316 teachers who completed the survey compose the sample for these analyses. The sample size of 316 provided a margin of error of 5.18% and a 94.1% confidence interval (www.raosoft.com/samplesize.html). For hypotheses numbered 6 to 11, participants' data were grouped among the schools that had both a principal and at least 6 teachers respond, so that the school was the unit of analysis. Of the 151 schools in the population, 33 schools composed the sample for these analyses. The sample size of 33 provided a margin of error of 15.13% and a 48% confidence interval (www.raosoft.com/samplesize.html). For this reason, additional analysis for Hypotheses 6-11 was warranted, and are discussed later in this chapter.

Table 7
Sample Characteristics

	n	% of Return	% of Population
Schools contacted by permission	81		53.6
Principal surveys sent	79	100.0	53.4
Principal surveys completed	41	51.9	27.7
Teacher surveys sent	1085	100.0	39.8
Teacher surveys completed	316	29.1	11.6
Schools with at least 6 teachers and the principal complete the survey	33	40.7	21.9

Note. Some schools within a district may share a full-time principal.

Descriptive analyses: Demographics and variables.

This next section of the preliminary analyses includes the descriptive statistics for the sample's respondents. There are four sets of tables that are presented in this section that are used for the conclusions in Chapter Five. Tables 8 through 11 report the results of the demographics portion of the survey (Gender, Age Groups, Highest Degree, and Years of Experience). Tables 12 through 15 report the descriptive statistics of the four variables (Time Implementing IEFA, Highest IEFA Training Level, Peak Stage of Concern, and the Leadership Support Score). Tables 16 and 17 report the comparisons of the variables categorized to the amount of time the teacher implements IEFA in the classroom. Lastly, Tables 18 and 19 reports the comparisons of the variables categorized by the teachers' Peak Stage of Concern. Continuous data were reported by raw number, range, mean, and standard deviation. Categorical data were reported by frequency and percentage. Items with the highest response percentage or mean appear as bolded font.

Tables 8 reports the demographics of gender (sex). Of the 316 teachers in the sample, 87% (275) are female. The majority of the principal sample was also female, which constitutes 63.6% (21) of the 33 principals.

Table 8
Gender (sex)

Principal or Teacher		Frequency	Percent
Teacher	Male	41	13.0
	Female	**275**	**87.0**
	Total	316	100.0
Principal	Male	12	36.4
	Female	**21**	**63.6**
	Total	33	100.0

Table 9 reports the demographic of age groups for teachers and principals. The age group with the most teachers was the ages 30 to 39, which was 30.1% (95) of the sample. Of the surveyed teachers, 56% (177) were between the ages of 30 and 49 years, while 32.3% (102) were 50 and older. The youngest group of teachers, younger than 30 years, only made up 11.7% (37) of the sample. The principal sample reports that 51.5% (17) were 50 years or older, while 48.5% (16) were under 50 years. The largest subgroup were principals between the ages of 50 and 59 which was 33.3% (11) of the sample.

Table 9
Age Groups

Principal or Teacher		Frequency	Percent
Teacher	20-29	37	11.7
	30-39	**95**	**30.1**
	40-49	82	25.9
	50-59	76	24.1
	60+	26	8.2
	Total	316	100.0
Principal	30-39	10	30.3
	40-49	6	18.2
	50-59	**11**	**33.3**
	60+	6	18.2
	Total	33	100.0

Table 10 reports the demographics of highest degree earned by teachers and principals. Of the 316 teachers, 64.2% (203) had earned their masters degrees, while 34.5% (109) only have the minimum of a bachelor's degree. There were four teachers (1.3%) that had earned their doctoral degrees. Of the 33 principals surveyed, only 1 had earned their doctoral degree.

Table 10
Highest degree earned

Principal or Teacher		Frequency	Percent
Teacher	Bachelors	109	34.5
	Masters	**203**	**64.2**
	Doctoral	4	1.3
	Total	316	100.0
Principal	**Masters**	**32**	**97.0**
	Doctoral	1	3.0
	Total	33	100.0

Table 11 reports the years of experience for teachers and principals. Within teacher data (n=316) there was a range of 0 to 39 years at current school, with an average of 9.47 years. The teacher sample had a range of less than a year to 42 years with an average of 14.94 years of total teaching experience. Of the 33 principals, years at their current school had a range of 0 to 44 years, with an average of 10.21 years. The range for actual administration experience was 0 to 22 years, with an average of 8.97 years.

Table 11
Years of experience (total and current school)

Principal or Teacher		n	Range	Mean	Std. Deviation
Teacher	Years at Current School	316	0-39	9.47	8.438
	Total Years Teaching	316	0-42	14.94	9.689
Principal	Years at Current School	33	0-44	10.21	10.937
	Total Years Teaching	33	0-35	14.76	7.918
	Total Years in Administration	33	0-22	8.97	6.664

Tables 12 through 15 reports the descriptive statistics on the four variables used in the study (Time Implementing IEFA, Highest IEFA Training Level, Peak Stage of Concern, and the Leadership Support Score). Table 12 reports on the amount of time that teachers and principals

spend implementing IEFA in their classrooms or schools. Of the 316 teachers, 67.7% (214) reported that they spend between 1 and 5 hours of classroom implementation per week. On the other hand, more than a quarter (26.3%) reported not implementing IEFA in their classroom at all. Only 6% (19) report spending more than 6 hours a week implementing IEFA. Of the 33 principals in the sample, 66.7% (22) reported spending 1 to 5 hours per week implementing IEFA in their buildings. Only 9.1% (3) reported spending more than 6 hours a week, while 24.2% (8) reported not supporting IEFA in their buildings on a weekly basis.

Table 12
Time Implementing IEFA (per week)

Principal or Teacher		Frequency	Percent
Teacher	0 Hours	83	26.3
	1-5 Hours	**214**	**67.7**
	6-10 Hours	6	1.9
	11+ Hours	13	4.1
	Total	316	100.0
Principal	0 Hours	8	24.2
	1-5 Hours	**22**	**66.7**
	6-10 Hours	3	9.1
	Total	33	100.0

Table 13 reports the highest IEFA training level that teachers and principals had participated in. Of the 316 teachers, 37.7% (119) reported that they have never received training for IEFA. The Level 1 (Awareness) training had been completed by 20.9% (66) of the teachers, while 41.5% (131) reported they had received a higher level of training. Of the 33 principals, one-third (33.3%) reported receiving a Level 3 training, while 48.5% (16) reported a Level 1 or 2. Principals who reported not ever participating in IEFA training made up 18.2% (6) of the sample.

Table 13
Highest IEFA Training Level

Principal or Teacher		Frequency	Percent
	No Training	**119**	**37.7**
	Level 1	66	20.9
Teacher	Level 2	79	25.0
	Level 3	52	16.5
	Total	316	100.0
	No Training	6	18.2
	Level 1	7	21.2
Principal	Level 2	9	27.3
	Level 3	**11**	**33.3**
	Total	33	100.0

Table 14 reports the Peak Stage of Concern as measured by the Stages of Concern Questionnaire. A total of 92% (291) of the teachers reported to be within Stages 0 to 2 regarding their concerns about IEFA. Of the 291 teachers within these stages, 11% (35) reported to be in Stages 1 or 2, while the largest percent (81%, 256) identified they were in Stage 0 (Unconcerned). Only 7.9% (25) had a Peak Stage of Concern in Stage 3 or above. No teachers reported to have Stage 4 (Concern about Students) as their Peak Stage of Concern. The principal group showed similar results with 90.9% (30) within Stages 0 to 2, while only 9.1% was above Stage 2 (3). No principal had reported to have a Peak Stage of Concern in Stages 1, 3, 4, or 6.

Table 14
Peak Stage of Concern

Principal or Teacher		Frequency	Percent
Teacher	**Stage 0**	**256**	**81.0**
	Stage 1	15	4.7
	Stage 2	20	6.3
	Stage 3	5	1.6
	Stage 4	0	0.0
	Stage 5	17	5.4
	Stage 6	3	0.9
	Total	316	100.0
Principal	**Stage 0**	**29**	**87.9**
	Stage 1	0	0.0
	Stage 2	1	3.0
	Stage 3	0	0.0
	Stage 4	0	0.0
	Stage 5	3	9.1
	Stage 6	0	0.0
	Total	33	100.0

Table 15 reports the Leadership Support Score as measured by Learning Forward's Self-Assessment Inventory 2 (SAI2) Subscale Standard. The Leadership Support score has a range between 0 and 28. The average score reported by the 316 teachers in the sample was 22.72 with a standard deviation of 5.70. The 33 principals in the sample scored themselves slightly higher with and average score of 24.76 and standard deviation of 3.28.

Table 15
Leadership Support Score (SAI2)

	Teachers	Principals
n	316	33
Minimum	0	0
Maximum	28	28
Mean	22.72	24.76
Std. Deviation	5.70	3.28

Tables 16 and 17 report the comparisons of the teachers' reported time implementing IEFA in their classrooms per week to that of two other variables (Highest IEFA Training Level and Peak Stage of Concern). Table 16 reports that of the 83 teachers who reported that they didn't implement IEFA in their classrooms, 55.4% (46) never received IEFA training. Of the 214 teachers who reported spending 1 to 5 hours per week, 30.4% (65) reported to never receive training in IEFA, while an equal percentage (30.4%) reported having as high as Level 2 training. Only six teachers reported spending between 6 and 10 hours, with 66.7% (4) of these participants never having training. For the 13 teachers who reported spending more than 11 hours a week, 38.5% (5) had received a Level 3 training.

Table 16
Time Implementing IEFA Compared to Highest IEFA Training Level

		Time Implementing IEFA (per week)							
		0 Hours		1-5 Hours		6-10 Hours		11+ Hours	
		n	%	n	%	n	%	n	%
Highest Level	No Training	**46**	**55.4**	**65**	**30.4**	**4**	**66.7**	4	30.8
	Level 1	22	26.5	41	19.2	1	16.7	2	15.4
	Level 2	11	13.3	**65**	**30.4**	1	16.7	2	15.4
	Level 3	4	4.8	43	20.1	--	--	**5**	**38.5**
	Total	83	100.0	**214**	100.0	6	100.0	13	100.0

Table 17 reports the comparison between the two variables reported by teachers of how much time they implement IEFA in their classrooms per week to that of the highest level of IEFA training they reported to have received. Of the four categories that teachers could choose from, all four had the largest percentage of teachers identify as a Stage 0 (Unconcerned). Of the 83 who reported to not spend time implementing IEFA in their classrooms, 88% (73) were at a Stage 0. Of the 214 teachers who reported to spend between 1 and 5 hours per week implementing IEFA in their classroom, 80.8% (173) were at a Stage 0. Half (50%) of the six

teachers who reported spending between 6 and 10 hours per week were at a Stage 0. Of the 13 teachers who reported to spend more than 11 hours per week, 53.8% (7) were at a Stage 0. Of the 83 teachers who reported to not implement IEFA, none reported to also be in Stages 3 or above. The only group that reported to have a large percent of teachers in Stages 3 or above were the teachers who implemented 11 or more hours per week, with 30.8% (4) of the thirteen teachers in this group.

Table 17
Time Implementing IEFA Compared to Peak Stage of Concern

		Time Implementing IEFA (per week)							
		0 Hours		1-5 Hours		6-10 Hours		11+ Hours	
		n	%	n	%	n	%	n	%
Peak Stage	Stage 0	**73**	**88.0**	**173**	**80.8**	**3**	**50.0**	**7**	**53.8**
	Stage 1	4	4.8	9	4.2	--	--	2	15.4
	Stage 2	6	7.2	12	5.6	2	33.3	--	--
	Stage 3	--	--	3	1.4	1	16.7	1	7.7
	Stage 5	--	--	14	6.5	--	--	3	23.1
	Stage 6	--	--	3	1.4	--	--	--	--
	Total	83	100.0	**214**	100.0	6	100.0	13	100.0

Note. No participant had a Peak Stage 4 Concern.

Tables 18 and 19 report the comparisons of the teachers' Peak Stage of Concern to that of two other variables (Highest IEFA Training Level and Highest Degree Earned). Table 18 compares the teachers' Peak Stage of Concern to that of their reported highest level of IEFA training. Of the 256 teachers reported within Stage 0, 41.4% (106) reported to have not received training in IEFA, while 21.5% (55) had done Level 1, 23.4% (60) had a Level 2 training, and only 13.7% (35) had completed a Level 3 training. Of the 15 teachers who report to be a Stage 1 concern, 6.7% (1) had received no training, while 80% (12) reported to be have received either a Level 1 or 2 training. Of the twenty teachers who are reported as a Stage 2 concern, 50% (10)

reported to not have received training. Twenty five teachers reported to be at a Stage 3 or above in their concerns. Of these 25, the largest percentages within each respective group all reported to have received a Level 3 training. The Stage 3 teachers had 40% (2), the Stage 5 teachers had 47.1% (8), and the Stage 6 teachers had 66.7% (2) reporting as a Level 3 training.

Table 18
The Peak Stage of Concern Compared to Highest IEFA Training Level

	Peak Stage of Concern											
	Stage 0		Stage 1		Stage 2		Stage 3		Stage 5		Stage 6	
	n	%	n	%	n	%	n	%	n	%	n	%
No Training	**106**	**41.4**	1	6.7	**10**	**50.0**	1	20.0	1	5.9	--	--
Level 1	55	21.5	**6**	**40.0**	3	15.0	1	20.0	1	5.9	--	--
Level 2	60	23.4	**6**	**40.0**	4	20.0	1	20.0	7	41.2	1	33.3
Level 3	35	13.7	2	13.3	3	15.0	**2**	**40.0**	**8**	**47.1**	**2**	**66.7**
Total	**256**	100.0	15	100.0	20	100.0	5	100.0	17	100.0	3	100.0

Note. No participant had a Peak Stage 4 Concern.

Table 19 compares the teachers' Peak Stage of Concern to that of their reported highest degree earned. A Masters was the highest degree earned by teachers that identified with five of the six stages of concern- Stage 0 was 66% (169), Stage 1 was 66.7% (10), Stage 2 was 65% (13), Stage 3 was 60% (3), and Stage 6 was 66.7% (2). Stage 5 was the only group that reported more bachelor's degrees at 64.7% (11). The four teachers who reported to have a doctorate all reported as a Stage 0 Concern.

Table 19
The Peak Stage of Concern Compared to Highest Degree Earned

	Peak Stage of Concern											
	Stage 0		Stage 1		Stage 2		Stage 3		Stage 5		Stage 6	
	n	%	n	%	n	%	n	%	n	%	n	%
Bachelors	83	32.4	5	33.3	7	35.0	2	40.0	**11**	**64.7**	1	33.3
Masters	**169**	**66.0**	**10**	**66.7**	**13**	**65.0**	**3**	**60.0**	6	35.3	**2**	**66.7**
Doctoral	4	1.6	--	--	--	--	--	--	--	--	--	--
Total	**256**	100.0	15	100.0	20	100.0	5	100.0	17	100.0	3	100.0

Note. No participant had a Peak Stage 4 Concern.

Stage Two: Correlations

This stage of the data analyses examined relationships between the variables utilizing Spearman's *rho* correlations. Data from eleven hypotheses informed the research questions. For a certain portion of this study's data analysis, teacher and principal data were grouped according to school. The minimum threshold of six teachers was used to represent the school's teaching staff. Hypotheses one through five did not require the data to be grouped. For hypotheses six through 11, the relationships examined were between teacher data and that of their respective principal. The mean score was calculated for the teacher data of any school that had six or more teacher participants and the school's principal. Each hypothesis is reported along with the direction of the relationship, the strength of the relationship, and the level of statistical significance. The effect size was calculated by squaring *r*. A two-tailed test of significance was used in the calculation, with a statistically significant relationship determined *a priori* as being a p-value of $\leq .05$.

The first research hypothesis is:

H_1 - There is a relationship between the Leadership Subscale score and the teachers' Peak Stage of Concern about the innovation.

Table 20 reports the statistical analysis of the relationship between the Leadership Support Score and Teacher's Peak Stage of Concern produced a Spearman *rho* correlation coefficient of -.002. A two tailed test of significance revealed a p-value of .967 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The first hypothesis was not supported.

Table 20
First Hypothesis

			Leadership Support Score
Spearman's rho	Peak Stage of Concern	Correlation Coefficient	-.002
		Sig. (2-tailed)	.967
		n	316

The second research hypothesis is:

H_1 – There is a relationship between the Leadership Subscale score and the amount of time the teacher spent implementing Indian Education for All in the classroom.

Table 21 reports the statistical analysis of the relationship between Leadership Support Score and the amount of time the teacher spent implementing IEFA in the classroom per week produced a Spearman *rho* correlation coefficient of .067. A two tailed test of significance revealed a p-value of .232 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The second hypothesis was not supported.

Table 21
Second Hypothesis

			Time Implementing IEFA
Spearman's rho	Leadership Support Score	Correlation Coefficient	.067
		Sig. (2-tailed)	.232
		n	316

The third research hypothesis is:

H_1 – There is a relationship between the Leadership Subscale score and the highest level of Indian Education for All training completed by the teacher.

Table 22 reports the statistical analysis of the relationship between Leadership Support Score and the teacher's highest IEFA training level produced a Spearman *rho* correlation coefficient of .053. A two tailed test of significance revealed a p-value of .347 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The third hypothesis was not supported.

Table 22
Third Hypothesis

			Highest IEFA Training Level
Spearman's rho	Leadership Support Score	Correlation Coefficient	.053
		Sig. (2-tailed)	.347
		n	316

The fourth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the teacher and the teachers' Peak Stage of Concern about the innovation.

Table 23 reports the statistical analysis of the relationship between the teacher's highest IEFA training level and the teacher's Peak Stage of Concern produced a Spearman *rho* correlation coefficient of .214. A two tailed test of significance revealed a p-value < .001 which met the alpha level criterion for statistical significance. Therefore, the null hypothesis was rejected. The fourth hypothesis was supported.

Table 23
Fourth Hypothesis

			Peak Stage of Concern
Spearman's rho	Highest IEFA Training Level	Correlation Coefficient	.214**
		Sig. (2-tailed)	.000
		n	316

The fifth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the teacher and the amount of time the teacher spent implementing Indian Education for All in the classroom?

Table 24 reports the statistical analysis of the relationship between the teacher's highest IEFA training level and the teacher's time implementing IEFA in the classroom produced a Spearman *rho* correlation coefficient of .250. A two tailed test of significance revealed a p-value < .001 which met the alpha level criterion for statistical significance. Therefore, the null hypothesis was rejected. The fifth hypothesis was supported.

Table 24
Fifth Hypothesis

			Time Implementing IEFA
Spearman's rho	Highest IEFA Training Level	Correlation Coefficient	.250**
		Sig. (2-tailed)	.000
		n	316

The sixth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the teachers' Peak Stage of Concern about the innovation.

Table 25 reports the statistical analysis of the relationship between the principal's highest IEFA training level and the teacher's Peak Stage of Concern produced a Spearman *rho* correlation coefficient of -.260. A two tailed test of significance revealed a p-value of .144 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The sixth hypothesis was not supported by the grouped data.

Table 25
Sixth Hypothesis (Grouped)

			Highest IEFA Training Level (Principal)
Spearman's rho	Peak Stage of Concern (Teacher)	Correlation Coefficient	-.260
		Sig. (2-tailed)	.144
		n	33

The seventh research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the amount of time the teacher spent implementing Indian Education for All in the classroom.

Table 26 reports the statistical analysis of the relationship between the principal's highest IEFA training level and teacher's time implementing IEFA in the classroom produced a Spearman *rho* correlation coefficient of .035. A two tailed test of significance revealed a p-value of .848 which did not meet the alpha level criterion for statistical significance. Therefore, the

researcher failed to reject the null hypothesis. The seventh hypothesis was not supported by the grouped data.

Table 26
Seventh Hypothesis (Grouped)

			Time Implementing IEFA (Teacher)
Spearman's rho	Highest IEFA Training Level (Principal)	Correlation Coefficient	.035
		Sig. (2-tailed)	.848
		n	33

The eighth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the highest level of Indian Education for All training completed by the teacher.

Table 27 reports the statistical analysis of the relationship between the principal's highest IEFA training level and the teacher's highest IEFA training level produced a Spearman *rho* correlation coefficient of .382. A two tailed test of significance revealed a p-value of .028 which did meet the alpha level criterion for statistical significance. Therefore, the null hypothesis was rejected. The eighth hypothesis was supported by the grouped data.

Table 27
Eighth Hypothesis (Grouped)

			Highest IEFA Training Level (Teacher)
Spearman's rho	Highest IEFA Training Level (Principal)	Correlation Coefficient	.382*
		Sig. (2-tailed)	.028
		n	33

The ninth research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the teachers' Peak Stage of Concern about the innovation.

Table 28 reports the statistical analysis of the relationship between the principal's Peak Stage of Concern and the teacher's Peak Stage of Concern produced a Spearman *rho* correlation coefficient of -.066. A two tailed test of significance revealed a p-value of .717 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The ninth hypothesis was not supported by the grouped data.

Table 28
Ninth Hypothesis (Grouped)

			Peak Stage of Concern (Teacher)
Spearman's rho	Peak Stage of Concern (Principal)	Correlation Coefficient	-.066
		Sig. (2-tailed)	.717
		n	33

The tenth research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the amount of time the teacher spent implementing Indian Education for All in the classroom.

Table 29 reports the statistical analysis of the relationship between the principal's Peak Stage of Concern and the teacher's time implementing IEFA in the classroom produced a Spearman *rho* correlation coefficient of -.306. A two tailed test of significance revealed a p-value of .083 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The tenth hypothesis was not supported by the grouped data.

Table 29
Tenth Hypothesis (Grouped)

			Time Implementing IEFA (Teacher)
Spearman's rho	Peak Stage of Concern (Principal)	Correlation Coefficient	-.306
		Sig. (2-tailed)	.083
		n	33

The eleventh research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the highest level of Indian Education for All training completed by the teacher.

Table 30 reports the statistical analysis of the relationship between the principal's Peak Stage of Concern and the teacher's highest IEFA training level produced a Spearman *rho* correlation coefficient of .291. A two tailed test of significance revealed a p-value of .101 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The eleventh hypothesis was not supported by the grouped data.

Table 30
Eleventh Hypothesis (Grouped)

			Highest IEFA Training Level (Teacher)
Spearman's rho	Peak Stage of Concern (Principal)	Correlation Coefficient	.291
		Sig. (2-tailed)	.101
		n	33

Additional analysis.

As mentioned earlier in this chapter, additional analysis for Hypotheses six through eleven was warranted. For the initial correlations of hypotheses numbered six to 11, participants' data were grouped and averaged among the schools that had both a principal and at least six teachers respond. This resulted in only 33 of the 151 schools composing the sample, and a

margin of error of 15.13% with a 48% confidence interval. Hypotheses six through eleven were also analyzed in a non-grouped approach. Instead of averaging teacher data within a school staff and then comparing it to the principal's data; the principal's data were correlated to each individual teacher from their respective school. This resulted in a sample size of 236, which had a margin of error of 6.10% and a confidence interval of 89.15% (www.raosoft.com/samplesize.html). Tables 31 through 36 report the results of this analysis. The sixth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the teachers' Peak Stage of Concern about the innovation.

Table 31 reports the statistical analysis of the relationship between the principal's highest IEFA training level and the teacher's Peak Stage of Concern produced a Spearman *rho* correlation coefficient of .065. A two tailed test of significance revealed a p-value of .322 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The sixth hypothesis was not supported by the non-grouped data.

Table 31
Sixth Hypothesis (Non-Grouped)

			Highest IEFA Training Level (Principal)
Spearman's rho	Peak Stage of Concern (Teacher)	Correlation Coefficient	.065
		Sig. (2-tailed)	.322
		n	236

The seventh research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the amount of time the teacher spent implementing Indian Education for All in the classroom.

Table 32 reports the statistical analysis of the relationship between the principal's highest IEFA training level and teacher's time implementing IEFA in the classroom produced a Spearman *rho* correlation coefficient of .103. A two tailed test of significance revealed a p-value of .115 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The seventh hypothesis was not supported.

Table 32
Seventh Hypothesis (Non-Grouped)

			Time Implementing IEFA (Teacher)
Spearman's rho	Highest IEFA Training Level (Principal)	Correlation Coefficient	.103
		Sig. (2-tailed)	.115
		n	236

The eighth research hypothesis is:

H_1 – There is a relationship between the highest level of Indian Education for All training completed by the principal and the highest level of Indian Education for All training completed by the teacher.

Table 33 reports the statistical analysis of the relationship between the principal's highest IEFA training level and the teacher's highest IEFA training level produced a Spearman *rho* correlation coefficient of .185. A two tailed test of significance revealed a p-value of .004 which met the alpha level criterion for statistical significance. Therefore, the null hypothesis was rejected. The eighth hypothesis was supported by the non-grouped data.

Table 33
Eighth Hypothesis (Non-Grouped)

			Highest IEFA Training Level (Teacher)
Spearman's rho	Highest IEFA Training Level (Principal)	Correlation Coefficient	.185**
		Sig. (2-tailed)	.004
		n	236

The ninth research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the teachers' Peak Stage of Concern about the innovation.

Table 34 reports the statistical analysis of the relationship between the principal's Peak Stage of Concern and the teacher's Peak Stage of Concern produced a Spearman *rho* correlation coefficient of .128. A two tailed test of significance revealed a p-value of .050 which met the alpha level criterion for statistical significance. Therefore, the null hypothesis was rejected. The ninth hypothesis was supported by the non-grouped data.

Table 34
Ninth Hypothesis (Non-Grouped)

			Peak Stage of Concern (Teacher)
Spearman's rho	Peak Stage of Concern (Principal)	Correlation Coefficient	.128*
		Sig. (2-tailed)	.050
		n	236

The tenth research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the amount of time the teacher spent implementing Indian Education for All in the classroom.

Table 35 reports the statistical analysis of the relationship between the principal's Peak Stage of Concern and the teacher's time implementing IEFA in the classroom produced a Spearman *rho* correlation coefficient of .032. A two tailed test of significance revealed a p-value of .626 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The tenth hypothesis was not supported by the non-grouped data.

Table 35
Tenth Hypothesis (Non-Grouped)

			Time Implementing IEFA (Teacher)
Spearman's rho	Peak Stage of Concern (Principal)	Correlation Coefficient	.032
		Sig. (2-tailed)	.626
		n	236

The eleventh research hypothesis is:

H_1 – There is a relationship between the principals' Peak Stage of Concern about the innovation and the highest level of Indian Education for All training completed by the teacher.

Table 36 reports the statistical analysis of the relationship between the principal's Peak Stage of Concern and the teacher's highest IEFA training level produced a Spearman *rho* correlation coefficient of .039. A two tailed test of significance revealed a p-value of .551 which did not meet the alpha level criterion for statistical significance. Therefore, the researcher failed to reject the null hypothesis. The eleventh hypothesis was not supported by the non-grouped data.

Table 36
Eleventh Hypothesis (Non-Grouped)

			Highest IEFA Training Level (Teacher)
Spearman's rho	Peak Stage of Concern (Principal)	Correlation Coefficient	.039
		Sig. (2-tailed)	.551
		n	236

Additional correlations of demographic data.

Additional quantitative analysis was conducted to investigate the correlations based on the demographic categories. The results of this analysis illustrated that nine of the 11 hypotheses resulted in either no statistically significant relationships among the demographic groupings; or there were a few correlations that were statistically significant, but did not appear to result in any consistent pattern or theme among the demographic groups. It was with two of the nine hypotheses (Hypothesis Four and Five) that provided some thought-provoking patterns.

For the nine hypotheses that did not result in consistent patterns of statistically significant correlations, a few did have some sporadic, individual results. For example, Hypothesis One, which was the relationship between the Leadership Score and the teacher's Peak Stage of Concern had two correlations of interest. The first was the Age Group of 60+, which had the following results, $r_{s=}.565$, $p=.003$, $n=26$. The second was the Total Years of Teaching of 3 years, which resulted in a correlation, $r_{s=}$ $-.561$, $p=.046$, $n=13$. In both cases, there was a small sample size, and there was no clear theme or pattern that emerged for this first hypothesis. A few other examples were Hypothesis Two, which was the relationship between the Leadership Score and Time implementing in the classroom, which has only two statistically significant correlations, both within the demographic grouping of Total Years Teaching which for years 1 and 2 are reported here respectively: ($r_{s=}$ $-.683$, $p=.042$, $n=9$; and $r_{s=}$ $.621$, $p=.023$, $n=13$). This example shows a non-consistent pattern, in that a correlation for a Year 1 teacher is a negative relationship, while as Year 2 teacher is a positive one. Instead, what did emerge from these analyses is further support for the statistically significant relationship between the multi-tiered IEFA training levels to those of the teachers' readiness to implement and their actual time implementing as demonstrated in Hypotheses Four and Five.

Table 37 reports the statistically significant relationships that emerged from the demographic analysis of Hypotheses Four and Five. Hypothesis Four is the relationship between the Highest IEFA Training Level that the teacher completed to that of their Peak Stage of Concern. Hypothesis Five is the relationship between the Highest IEFA Training Level completed by the teacher and the amount of Time Implementing IEFA in their classroom. As explained earlier, the Peak Stage of Concern represents the teacher's readiness to implement a new program, while the other is a measure of the teacher's estimated time per week that they are actually spending on IEFA implementation in their classrooms.

For three out of the four demographic variables (Age Group, Highest Degree, and Gender) there is a consistent pattern among the subgroups that emerged to have statistically significant relationships, while for the demographic variable, Total Years Teaching, there was not a consistent pattern, but results are included here to show which subgroups met the alpha level criterion for the study.

Table 37 reports the statistical analysis by the demographic of Age Group for the relationships between Highest IEFA Training Level to that of the teacher's Peak Stage of Concern (Hypothesis Four) and the amount of time the teacher spent implementing IEFA in the classroom per week (Hypothesis Five). The subgroup of Ages 30-39 (n=95) and 40-49 (n=82) report Spearman's *rho* (r_s) correlation coefficients (with p-value in parentheses) for Null Hypothesis Four were .281 (.006), .325 (.003) respectively. The subgroup of Ages 30-39 (n=95) and 40-49 (n=82) report Spearman's *rho* (r_s) correlation coefficients (with p-value in parentheses) for Null Hypothesis Five were .332 (.001), .244 (.027) respectively. A two tailed test of significance revealed p-values which did meet the alpha level criterion for statistical significance. Therefore, the null hypotheses were rejected. As a result, Hypotheses Four and Five

were supported when analyzed by the demographic subgroup variables Age groups 30-39 and 40-49.

Table 37 reports the statistical analysis by the demographic of Highest Degree earned for the relationships between Highest IEFA Training Level to that of the teacher's Peak Stage of Concern (Hypothesis Four) and the amount of time the teacher spent implementing IEFA in the classroom per week (Hypothesis Five). The subgroup of Bachelors Degree (n=109) and Masters Degree (n=203) report Spearman's *rho* (r_s) correlation coefficients (with p-value in parentheses) for Null Hypothesis Four were .247 (.009), .208 (.003) respectively. The subgroup of Bachelors Degree (n=109) and Masters Degree (n=203) report Spearman's *rho* (r_s) correlation coefficients (with p-value in parentheses) for Null Hypothesis Five were .241 (.012), .261 (<.001) respectively. A two tailed test of significance revealed p-values which did meet the alpha level criterion for statistical significance. Therefore, the null hypotheses were rejected. As a result, Hypotheses Four and Five were supported when analyzed by the demographic subgroup variables Highest Degree earned for both Bachelors and Masters Degrees.

Table 37 reports the statistical analysis by the demographic of Gender (Sex) earned for the relationships between Highest IEFA Training Level to that of the teacher's Peak Stage of Concern (Hypothesis Four) and the amount of time the teacher spent implementing IEFA in the classroom per week (Hypothesis Five). The subgroup of Male (n=41) and Female (n=275) report Spearman's *rho* (r_s) correlation coefficients (with p-value in parentheses) for Null Hypothesis Four were .329 (.035), .195 (.001) respectively. The subgroup of Male (n=41) and Female (n=275) report Spearman's *rho* (r_s) correlation coefficients (with p-value in parentheses) for Null Hypothesis Five were .307 (.051), .236 (<.001) respectively. A two tailed test of significance revealed p-values which did meet the alpha level criterion for statistical significance. Therefore,

the null hypotheses were rejected. As a result, Hypotheses Four and Five were supported when analyzed by the demographic subgroup variables Gender (Sex) for both Male and Female teachers.

Table 37
Demographic Correlations to the Highest IEFA Training Level

			Peak Stage of Concern (Hypothesis 4)		Time Implementing in Classroom (Hypothesis 5)	
		n	r_s	*p*	r_s	*p*
Age Group	30-39	95	.281	.006*	.332	.001*
	40-49	82	.325	.003*	.244	.027*
Highest Degree	Bachelors	109	.247	.009*	.241	.012*
	Masters	203	.208	.003*	.261	<.001**
Gender	Male	41	.329	.035*	.307	.05*
	Female	275	.195	.001*	.236	<.001**
Total Years Teaching	3	13			.717	.006*
	12	9	.719	.029*		
	17	7	.904	.005*		
	21	6	.836	.038*		

Stage Three: Qualitative Analyses

This study complimented the dominant quantitative paradigm with a less dominant qualitative paradigm. This was accomplished in a dominant-less dominant mixed methods design that utilized a quantitative survey, while simultaneously utilizing a few embedded qualitative questions. A total of seven open-ended questions were used. Four open-ended questions

extended the data in terms of the Stages of Concern (SoCQ), while three open-ended questions extended the data on Leadership Support (SAI2) for IEFA. Tables 38 through 44 report the qualitative themes that surfaced in the participant's responses.

This Stage 3 analysis of the qualitative data investigated patterns and themes within the participant's responses, and included steps that guided the reduction, display, and interpretation of the data. The participant's responses to the seven open-ended questions were coded into categories and themes and reported utilizing various matrices. As suggested by Creswell (2009): "This involves creating codes and themes qualitatively, then counting the number of times they occur in the text data" (p. 218).

The first four open-ended questions were used for both teachers and administration to provide additional data regarding the various concerns by both the teacher and the administrator. Table 38 reports the results of open-ended Question 1 which asked the participants:

When I think about implementing Indian Education for All in my classroom/school, I am most concerned about….

Of the 246 teachers' comments, the largest percentage (36.6%) were concern about time, with comments such as "the time it takes to plan for and use it is my concern". Similarly, of the 57 principal comments, 28.1% were concerned about time as the largest percentage. The second most mentioned topic concerned General Implementation with 15.9% of the teachers and 17.5% of the principals mentioned "implementation" without specifying what aspect in detail. Additionally, teachers were concerned about the authenticity of IEFA lessons (12.6%), or they were worried that they would offend the native cultures in their lessons (5.7%). Remarks such as "I don't want to be offensive to any cultures" and "I often shy away from it so I don't offend anyone" are examples. Principals were equally concerned about resources and management of

IEFA with each category showing up in 14% of the comment respectively. Finally, a small percentage of teachers (4.1%) and principals (1.8%) noted that they were not concerned.

Table 38
Open-Ended Question 1

	Teacher		Principal	
	n	%	n	%
Time	**90**	**36.6%**	**16**	**28.1%**
Resources	27	11.0%	8	14.0%
Management	7	2.8%	8	14.0%
Need More Training	23	9.3%	6	10.5%
Authenticity	31	12.6%	5	8.8%
Offending Cultures	14	5.7%	1	1.8%
General Implementation	**39**	**15.9%**	**10**	**17.5%**
Not Concerned	10	4.1%	1	1.8%
Other	5	2.0%	2	3.5%
Total	246	100%	57	100%

Table 39 reports the results of open-ended question 2 which asked the participant:

How does Indian Education for All implementation affect student learning in your classroom/school?

Of the 243 teacher and the 48 principal comments, the multiple themes took on either a positive connotation or that of a negative one. The majority of teachers' comments (69.6%) and that of the principals' comments (60.5%) were categorized as positive. The topic that was the largest percentage of each respective group was Teachers-Improved Awareness (25.9%) and Principals-Enhanced Instruction (33.3%). One teacher stated that because of IEFA, "I have become a better teacher…Montana is rich in diversity and great history". Teachers also observed that IEFA had affected Enhanced Instruction in their classroom (22.6%) by being "more aware of the need to include other cultures in my lessons". The comments of "Not Affected" were identified as either a positive comment (2.5%) or a negative comment (14%). The main difference being that the positive comments related to an indication that IEFA was something

they valued, but had been implementing as a teacher prior to the law's existence. One teacher responded with "I am Native American and I appreciate the validation [of] our culture". Additionally, negative comments were that IEFA "Increased Stress" with 4.5% of teachers and 2.1% of principals having that perception. Finally, the sentiment that IEFA "Added More to Do" appeared in 6.6% of teacher and 4.2% of principal comments, with commentaries such as "I think it has wasted a lot of more valuable learning opportunities" and "it is something else to squeeze into the curriculum".

Table 39
Open-Ended Question 2

	Teacher		Principal	
	n	%	n	%
Increased Knowledge	14	5.8%	1	2.1%
Improved Awareness	**63**	**25.9%**	6	12.5%
Enhanced Instruction	55	22.6%	**16**	**33.3%**
Cultural Proficiency	24	9.9%	3	6.3%
Not Affected (Positive)	6	2.5%	0	0.0%
Other (Positive)	7	2.9%	3	6.3%
Increased Stress	11	4.5%	1	2.1%
Added More to Do	16	6.6%	2	4.2%
Generally Negative	7	2.9%	4	8.3%
Not Affected (Negative)	34	14.0%	7	14.6%
Other (Negative)	6	2.5%	5	10.4%
Total	243	100%	48	100%

Table 40 reports the results of open-ended question 3 which asked the participant:

How has Indian Education for All implementation in your classroom/school affected you as a teacher (as an administrator)?

Both the teacher (22.1%) and the principal (24.4%) respondents identified "Enhanced Learning" as their top category and included comments such as "Enhances learning with real life examples". On the other hand, 17.4% of teachers, and 17.8% of principals indicated negatively that IEFA had not affected them as an educator, with one such statement as "not exposing my

students to it, so [I'm] not affected". Still, 74.2% of teachers' and 60% of principals' comments were categorized as positive. For teachers, 18.2% identified that IEFA had made them more culturally proficient, while 12.6% said that it increased their awareness about America Indian cultures. "It helps students understand stereotyping and bias" and "[IEFA] has sparked an interest in Montana's native people and appreciation for our diversity" were a few of the positive observations made. On the other hand, negative comments were made that IEFA actually "Takes Away from the Basics" in 3.2% of the teachers' comments, and 6.7% of the principals' comments.

Table 40
Open-Ended Question 3

	Teacher		Principal	
	n	%	n	%
Increased Knowledge	39	15.4%	3	6.7%
Improved Awareness	32	12.6%	4	8.9%
Enhanced Learning	**56**	**22.1%**	**11**	**24.4%**
Cultural Proficiency	46	18.2%	4	8.9%
Not Affected (Positive)	3	1.2%	0	0.0%
Other (Positive)	12	4.7%	5	11.1%
Takes Away from Basics	8	3.2%	3	6.7%
Generally Negative	11	4.3%	0	0.0%
Not Affected (Negative)	44	17.4%	8	17.8%
Other (Negative)	2	0.8%	7	15.6%
Total	253	100%	45	100%

Table 41 reports the results of open-ended question 4 which asked the participant:

What kind of support is needed in order to continue to implement Indian Education for All in your classroom/school? Please be specific.

Of the 328 teacher comments, the largest percentage was in the category of Resources (24.7%) concerning what kind of support they needed to continue their IEFA implementation, such as "more IEFA lessons that incorporate technology" and "we definitely need the resources

that are correct and authentic". For principals, it was Professional Learning (35.3%) that they identified as their top need, with one principal mentioning that "we need to keep the enthusiasm flowing, ideas fresh, and professional development current". The category of Guidance appeared in 18.6% of teacher comments, while 14.7% of principals identified this same need. Remarks such as "continued support from IEFA instructional coaches" highlighted the need for support from Instructional Coaches and appeared in 11.3% of teacher responses, while 8.8% of principals identified this as a need. The topics of Time and Money were identified by 14.9% of the teachers and 16.2% of the principals. Participants who identified that they had no needs currently consisted of 4.3% of the teachers and 2.9% of principals.

Table 41
Open-Ended Question 4

	Teacher		Principal	
	n	%	n	%
Guidance	61	18.6%	10	14.7%
Time	41	12.5%	6	8.8%
Money	8	2.4%	5	7.4%
Resources	**81**	**24.7%**	11	16.2%
Instructional Coaches	37	11.3%	6	8.8%
Professional Learning	49	14.9%	**24**	**35.3%**
Collaboration	21	6.4%	1	1.5%
No Needs	14	4.3%	2	2.9%
Other	16	4.9%	3	4.4%
Total	328	100%	68	100%

The last three open-ended questions were based on the three core elements of the Learning Forward Leadership Standard (2011), which identified the need for school leaders to develop capacity, advocate, and create support systems for professional learning in their schools (p. 61). The teacher questions focused on the leadership support of their principal, while the administrator questions were a self-evaluation.

Table 42 reports the results of open-ended question 5 which asked the participant:

Teacher - In general, what has your principal done to advocate for Indian Education for All professional learning in your school?

Principal - In general, what have you done to advocate for Indian Education for All professional learning in your school?

Of the 303 teacher comments, 23.1% identified that they felt that their principal had not done anything to advocate for IEFA in their schools, while only 4.5% of the principals self-identified with this category. Comments such as "nothing specific comes to mind in what my principal has done to advocate directly for IEFA" illustrate the common perception of teachers. Of the 88 principal remarks, 20.5% self-reported that they had supported Professional Learning in their schools, compared to 11.6% of the teachers identifying that category. Collaboration was a topic that both teachers (18.5%) and principals (18.2%) identified that had been advocated for in their buildings. General Implementation advocacy, such as "returned from meetings with materials and information for the staff" was identified by 15.8% of the teachers and by 14.8% of the principals. School-wide activities, such as "celebrate and honor September Native American day and November's American Indian Heritage Month", was mentioned in 4.6% of the teachers' comments and 4.5% of the principals' comments. Additionally, the principal's advocacy of providing resources was identified by 8.9% of the teachers and 11.4% of the principals. Finally, the topic of the principal providing time to develop, plan, or implement IEFA was identified by only 3.3% of teachers and 2.3% of principals.

Table 42
Open-Ended Question 5

	Teacher		Principal	
	n	%	n	%
Shared General Information	30	9.9%	11	12.5%
Provided Time	10	3.3%	2	2.3%
Professional Learning	35	11.6%	**18**	**20.5%**
Implementation	48	15.8%	13	14.8%
Resources	27	8.9%	10	11.4%
Guidance	7	2.3%	7	8.0%
Collaboration	56	18.5%	16	18.2%
Money	1	0.3%	1	1.1%
Nothing	**70**	**23.1%**	4	4.5%
Other	5	1.7%	2	2.3%
School-wide Activities	14	4.6%	4	4.5%
Total	303	100%	88	100%

Table 43 reports the results of open-ended question 6 which asked the participant:

Teacher - What are the support systems and structures your principal has created for Indian Education for All implementation in your school? Please be specific.

Principal - What are the support systems and structures you have created for Indian Education for All implementation in your school? Please be specific.

For both teacher (29.9%) and principal (35.2%) respondents, comments such as "designated time for collaboration and planning" was the largest percentage being identified as a support system for IEFA that the principal created in their schools. A large percentage of teachers (29.0%) also observed that their principal had done nothing to create a support system in their schools, as compared to 9.9% of principals self-reporting this same issue, with commentaries such as "none that I am aware of" and "no given time to actually go thru items [or] to plan". The support system of Resources was again mentioned by both teachers (11.2%) and principals (22.5%) as a topic that was being focused on in their buildings. Professional Learning was identified by small percentages of teachers (3.1%) and principals (7%) as a support beings

created in school buildings with comments like "providing coverage to attend training". Finally, a new topic was identified as a support system in schools, which is American Indian Guest Speakers such as Jack Gladstone or Leo Bird as a few mentioned by 2.2% of teachers and 1.4% of principals.

Table 43
Open-Ended Question 6

	Teacher		Principal	
	n	%	n	%
Shared General Information	20	8.9%	3	4.2%
Provided Time	10	4.5%	4	5.6%
Professional Learning	7	3.1%	5	7.0%
Implementation	2	0.9%	5	7.0%
Resources	23	11.2%	13	22.5%
Guidance	7	3.1%	0	0.0%
Collaboration	**67**	**29.9%**	**25**	**35.2%**
Nothing	65	29.0%	7	9.9%
Other	8	3.6%	3	4.2%
School-wide Activities	8	3.6%	2	2.8%
Guest Speakers	5	2.2%	1	1.4%
Total	224	100%	71	100%

Table 44 reports the results of open-ended question 7 which asked the participant:

Teacher - What has your principal done to develop teacher capacity for learning about Indian Education for All and its implementation in your school? Please be specific

Principal - What have you done to develop your own knowledge and capacity to lead Indian Education for All implementation in your school? Please be specific.

Out of all of the categories, the perception that the principal has done nothing was identified by 40% of the teachers, while only 13.8% of the principals self-reported that they had done nothing to develop their own capacity. Comments such as "My principal has not done anything to develop our capacity of learning IEFA in the past four years" highlight the lack of support mentioned. For principals, Professional Learning (29.3%) and Attending Conferences

(10.3%) was identified as something they had done to develop their own capacities, while 12% of teachers identified both of these categories as something the principals had supported in their schools. One principal identified that they attended "various training opportunities, networking with other administrators, site-based team planning and leadership" activities.

Table 44
Open-Ended Question 7

	Teacher		Principal	
	n	%	n	%
Shared General Information	16	8.0%	10	17.2%
Guest Speakers	9	4.5%	1	1.7%
Professional Learning	18	9.0%	**17**	**29.3%**
Attended Conferences	6	3.0%	6	10.3%
Field Trips	2	1.0%	0	0.0%
Collaboration	24	12.0%	7	12.1%
Nothing	**80**	**40.0%**	8	13.8%
Guidance	12	6.0%	3	5.2%
Provided Time	7	3.5%	0	0.0%
School-wide Activities	5	2.5%	0	0.0%
Other	10	5.0%	2	3.4%
Resources	11	5.5%	4	6.9%
Total	200	100%	58	100%

Summary

In summary, this chapter reported the survey results of the study, which examined data specific to principal and teacher perceptions of the leadership support for Indian Education for All professional development in their school. The data collection process and the handling of the data were first explained. A brief explanation was given on how data from four variables were compared. This study examined relationships among the professional learning leadership support scores and the Peak Stage of Concern reported, the highest level of training completed, and the estimated amount of time of program implementation in the classroom. The data results were

then presented in three main sections based on the analysis structure: Preliminary Analysis; the Correlations; and the Open-Ended matrices.

First, the Preliminary Analysis was reported on the Population and Sample. Next, the Descriptive Analysis of the demographic data were reported, which included gender (sex) and age group. The descriptive analyses of the variables were then reported. This chapter also included reports of any descriptive comparisons between certain variables. The correlation results were then presented for each null hypothesis and included the Spearman Rho results. Teacher and principal data were grouped and analyzed with 33 schools as the unit of analysis, but then the data were ungrouped and analyzed on an individual basis. Finally, the results of the less dominate qualitative data collected from the open-ended questions were presented in their respective matrices.

In the next chapter, the relationship of the hypotheses to each of the five research questions, along with the analysis into each correlation based on the *a priori* assumptions are presented. Chapter Five contains the application of the results reported in Chapter Four to each of the five research questions. Additional findings are presented and discussed related to the demographics and qualitative data. The conclusions, along with recommendations for future studies are offered. Finally, the implications of this study's findings are discussed and recommendations to educational leaders for practical application.

Chapter Five – Conclusions

The purpose of this dominant-less dominant mixed-methods study was to examine data specific to principal and teacher perceptions of the leadership support for Indian Education for All professional development in their school. This study examined the relationships among the professional learning leadership support scores and the Peak Stage of Concern reported, the highest level of training completed, and the estimated amount of time of program implementation in the classroom and/or school. Comparisons of these four variables formed the basis of eleven hypotheses, which were designed to support the five research questions. This study examined if the level of leadership support, or the level of training received by teachers, had the stronger relationship to the teacher's highest stage of concern. Additionally, this study examined which factor - the level of leadership support, or the level of training received by teachers - had a stronger relationship on the amount of time spent on implementing the Indian Education for All innovation in the classroom.

This chapter contains the conclusions from the analyses reported in Chapter Four to each of the five research questions. Additional findings are presented and discussed related to the demographic and qualitative data. The conclusions, along with recommendations for future studies are then offered.

As described earlier in Chapter One, this study utilized one overarching question, which was supported by four additional questions to identify the relationships between the variables. The specific application of the hypotheses in relationship to Research Question One was described in Table 5, Chapter Three. This study examined Research Question One within the relationships posed by nine hypotheses. Research Question One was further informed by Research Questions Two to Five. The context for these last four research questions was the

comparison of correlation coefficients from two separate hypotheses. The purpose of these comparisons was to examine which variable has a "stronger relationship" with another commonly shared variable. The specific relationship examined within Research Questions Two thru Five was illustrated in Figure 1, located in Chapter Three.

Research Question One

Research Question One: *What is the relationship between a school leader's support for professional development and the teacher's implementation of a mandated state-wide innovation?*

The first research question used in this study examined the relationship between the factors that a principal demonstrated to support professional development practices in their school and the factors that teachers demonstrated in their implementation of a mandated state-wide innovation. This overarching research question is examined through nine different relationships, which can be organized into three alignments: (a) The Leadership Score – Hypotheses One through Three; (b) Principal's Highest Training level – Hypotheses Six through Eight; and (c) Principal's Peak Stage of Concern – Hypotheses Nine through 11. The analyses calculated Spearman Rho correlations which included tests of statistical significance. The analyses for Hypotheses Six through 11 were done in two different processes – grouped and non-grouped. A summary of the conclusions of Research Question One is addressed through the null hypotheses related to this research question.

The nine null hypotheses aligned to Research Question One were tested and the results are reported by the three alignments. For the second and third alignment that consists of null hypotheses six through 11, the results are presented for both the grouped data and then by the non-grouped data. Correlations were calculated using a Spearman's *rho* and a two-tailed test of

significance was calculated on each of the relationships explored. An alpha level of $\leq .05$ was determined a priori, which was used for determining statistical significance. There were no statistically significant relationships between the principal's leadership score and the teacher's Peak Stage of Concern, their time implementing IEFA in the classrooms, and their highest IEFA training level.

For the grouped analysis of the second alignment of null hypotheses, two out of the three grouped analyses did not have statistically significant relationships between the principal's highest IEFA training level and the grouped teachers' Peak Stage of Concern, and their time implementing IEFA in the classrooms. However, there was a statistically significant relationship between the principal's highest IEFA training level and the grouped teachers' highest IEFA training level. For the non-grouped analysis of the second alignment of null hypotheses, two out of the three non-grouped analyses did not have statistically significant relationships between the principal's highest IEFA training level and the non-grouped teacher's Peak Stage of Concern, and their time implementing IEFA in the classrooms. However, there was a statistically significant relationship between the principal's highest IEFA training level and the non-grouped teacher's highest IEFA training level.

For the grouped analysis of the third alignment of null hypotheses, there were no statistically significant relationships between the principal's Peak Stage of Concern and the grouped teachers' Peak Stage of Concern, their time implementing IEFA in the classrooms, or their highest IEFA training level. For two of the three non-grouped analyses, there were no statistically significant relationships between the principal's Peak Stage of Concern and the non-grouped teacher's highest IEFA training level, and their time implementing IEFA in the

classrooms. However, there was a statistically significant relationship between the principal's Peak Stage of Concern and the non-grouped teacher's Peak Stage of Concern.

The results of the statistical analyses showed that of the nine different hypotheses that were designed to explore the various relationships within Research Question One, Hypothesis eight was supported in both a grouped data and a non-grouped data approach. The effect size (r^2), or squaring the correlation coefficient from the Spearman Rho, was 14.59% for grouped data, while r^2=3.42% for the non-grouped data. Additionally, Hypothesis Nine was supported in the non-grouped data analysis. The effect size (r^2) was 1.64%, or approximately 2% for the non-grouped data. Therefore, the answer to Research Question One is that there is a statistically significant relationship between the principal's highest level of IEFA training and the teacher's highest level of IEFA training, and also a statistically significant relationship between the principal's Peak Stage of Concern and the teacher's Peak Stage of Concern.

Research Question Two

Research Question Two: *Which variable has the stronger relationship to the teacher's Peak Stage of Concern about the Indian Education for All innovation, the Leadership Subscale score, or the highest level of Indian Education for All training completed by the teacher?*

The second research question used in this study examined the relationships between the teacher's Peak Stage of Concern and two other variables with the intent to identify which of the two relationships were stronger and more significant. The data analyses were comprised of Spearman Rho correlations with tests of statistical significance. A summary of the conclusions of Research Question Two is addressed through the null hypotheses related to this research question.

The null hypotheses One and Four addressed Research Question Two. Null Hypothesis One explored the relationship between the teacher's Peak Stage of Concern and the Leadership Support Score. Null Hypothesis Four explored the relationship between the teacher's Peak Stage of Concern and the highest level of IEFA training completed by the teacher. Correlations were conducted using a Spearman Rho and a two-tailed test of significance was calculated on each of the relationships explored. A significance level of $\leq .05$ was determined a priori, which was used for determining statistical significance.

For Research Question Two, there was no statistically significant relationship between the teacher's Peak Stage of Concern and the Leadership Support Score. The results of the statistical analyses showed that there is a statistically significant relationship between the teacher's Peak Stage of Concern and the highest level of IEFA training completed by the teacher. The effect size (r^2) was 4.57%. Therefore, the answer to Research Question Two is that the teacher's level of IEFA training has a stronger, and statistically significant, relationship to the teacher's Peak Stage of Concern.

Research Question Three

Research Question Three: *Which variable has the stronger relationship to the teacher's amount of time spent implementing Indian Education for All, the Leadership Subscale Score or the highest level of Indian Education for All training completed by the teacher?*

The third research question used in this study examined the relationships between the teacher's amount of time implementing IEFA in the classroom and two other variables –the Leadership Support Score and Teacher's Highest IEFA Training Level-with the intent to identify which of the two relationships were stronger and statistically significant. The data analyses comprise of Spearman Rho correlations and tests of statistical significance. A summary of the

conclusions of Research Question Three were addressed through the null hypotheses related to this research question.

The null hypotheses Two and Five were in relationship to Research Question Three. Null Hypothesis Two explored the relationship between the teacher's amount of time implementing IEFA in the classroom and the Leadership Support Score. Null Hypothesis Five explored the relationship between the teacher's amount of time implementing IEFA in the classroom and the highest level of IEFA training completed by the teacher. Correlations were calculated using a Spearman Rho and a two-tailed test of significance was calculated on each of the relationships explored. A significance level of $\leq .05$ was determined a priori, which was required for determining statistical significance.

The results of the statistical analyses showed that there is a statistically significant relationship between the teacher's amount of time implementing IEFA in the classroom and the highest level of IEFA training completed by the teacher. The effect size (r^2) was 6.25%. Therefore, the answer to Research Question Three is that the teacher's level of IEFA training has a stronger, and statistically significant, relationship to the teacher's amount of time implementing IEFA in the classroom.

Research Question Four

Research Question Four: *Which variable has the stronger relationship to the teachers' Peak Stage of Concern about the Indian Education for All innovation, the administrator's Peak Stage of Concern about the Indian Education for All innovation or the highest level of Indian Education for All training completed by the administrator?*

The fourth research question examined the relationships between the teacher's Peak Stage of Concern and two other variables with the intent to identify which of the two

relationships were stronger and statistically significant. The data analyses were comprised of Spearman *rho* correlations and tests of statistical significance done in two differing processes – grouped and non-grouped. A summary of the conclusions of Research Question Four is addressed through the null hypotheses.

The null hypotheses six and nine addressed Research Question Four. Null Hypothesis six explored the relationship between the teacher's Peak Stage of Concern and the highest level of IEFA training completed by the principal. Null Hypothesis nine explored the relationship between the teacher's Peak Stage of Concern and the principal's Peak Stage of Concern. Correlations were conducted using a Spearman Rho with a two-tailed test of significance calculated on each of the relationships explored – grouped and non-grouped. An alpha level of $\leq .05$ was determined a priori, which was required for determining statistical significance.

The results of the statistical analyses showed that there is a statistically significant relationship between the teacher's Peak Stage of Concern and the principal's Peak Stage of Concern. The effect size (r^2) was 1.64% for non-grouped data. Therefore, the answer to Research Question Four is that the principal's Peak Stage of Concern has a stronger, and statistically significant, relationship to the teacher's Peak Stage of Concern.

Research Question Five

Research Question Five: *Which variable has the stronger relationship to the teachers' amount of time spent implementing Indian Education for All in the classroom, the administrator's Peak Stage of Concern about the Indian Education for All innovation or the highest level of Indian Education for All training completed by the administrator?*

The fifth research question examined the relationships between the teacher's amount of time implementing IEFA in the classroom and two other variables – the principal's highest IEFA training completed and the principal's Peak Stage of Concern- with the

intent to identify which of the two relationships were stronger and statistically significant. The data analyses were comprised of Spearman Rho correlations and tests of statistical significance done in two different ways – grouped and non-grouped. A summary of the conclusions of Research Question Five is addressed through the null hypotheses related to this research question.

Null hypotheses seven and ten were in relationship to research question five. Null hypothesis seven explored the relationship between the teacher's amount of time implementing IEFA in the classroom and the highest level of IEFA training completed by the principal. Null hypothesis ten explored the relationship between the teacher's amount of time implementing IEFA in the classroom and the principal's Peak Stage of Concern. Correlations were conducted using a Spearman Rho and a two-tailed test of significance was calculated on each of the relationships explored– grouped and non-grouped. An alpha level of $\leq .05$ was determined a priori, used in determining statistical significance.

The results of the statistical analyses showed that there is no statistically significant relationship between the teacher's amount of time implementing IEFA in the classroom and the highest level of IEFA training completed by the principal. Nor is there a statistically significant relationship between the teacher's amount of time implementing IEFA in the classroom and the principal's Peak Stage of Concern. Therefore, there is neither a statistically significant relationship between the amount of time the teacher implements IEFA in the classroom and the principal's Peak Stage of Concern, nor is there a statistically significant relationship to the highest level of IEFA training completed by the principal.

Conclusions

This study examined the relationships among the leadership support scores, the Peak Stage of Concern, the highest level of training completed, and the estimated amount of time of program implementation in the classroom and/or school. Comparisons of these four variables resulted in eleven hypotheses, designed to support the five research questions. This study examined if the level of leadership support, or the level of training received by teachers, had the stronger relationship to the teacher's highest stage of concern. Additionally, this study examined which factor - the level of leadership support, or the level of training received by teachers - had a stronger relationship on the amount of time spent on implementing the Indian Education for All innovation in the classroom.

As discussed in Chapter Two, the Peak Stage of Concern is the variable that assists the educational leader in determining a teacher's "readiness" for implementation of a new program. The Peak Stage of Concern, as measured by the Stages of Concern Questionnaire, is the measure of where the teacher is on the implementation continuum. According to Hall and Hord (2011), implementation will not begin to take place until an individual is at least at Stage 3 (Management), with more effective implementations of the new programs happening in the higher stages. The Peak Stage of Concern is an indication of implementation "readiness", while the variable of the amount of time the teacher implemented IEFA in the classroom as the actual outcome of that readiness. The research sought to understand what factors impacted these two variables. Numerous studies (Bellanca, 2009; Costa, 1991; Fullan, 2013) provide the basis for learning transfer along a growth continuum.

The data from this study revealed that one variable had a positive and statistically significant relationship to both the teacher's Peak Stage of Concern and the actual amount of

time implementing IEFA in the classroom: The Highest Level of IEFA Training Completed by the Teacher. As a teacher received a higher level of IEFA training, there was a positive impact on the teacher's readiness to effectively implement IEFA, and that translated into more hours of actual classroom implementation. Ongoing professional development via purposeful, ongoing models is successful based on diffusion of ideas and close communications (Gladwell, 2000; Hall & Hord, 2011; Moore, 2002; Rogers, 2003; Ryan & Gross, 1943; Sinek, 2009). Table 2, Chapter Two, illustrated the three different training levels as developed by the State of Montana, and has served for the basis of the IEFA trainings in the state. Data illustrated that teachers who either had not received IEFA training at all, or had only participated in the lowest level (Awareness), also had Peak Stages of Concern between 0 and 2, and indicated they did little to no implementation of IEFA in the classroom.

The overarching purpose of this study was to examine what role the school principal has in impacting the teacher's readiness and implementation of IEFA. Data from this study revealed a clear indication that one principal variable had a positive and statistically significant relationship to the teacher's highest level of IEFA training - the highest level of IEFA training in which the principal participated. It was evident that the more active the principal was in increasing their level of IEFA training; the more positive influence on the teacher in attaining a higher level of IEFA training. The existing research illustrates the principal's influence on professional practices (Hall & Hord, 2011; Presler, 2006; Racek, 2008; Sparks, 2002). The principal who becomes an active and ongoing participant in the required professional learning will have the greatest influence on staff members attaining higher levels of readiness and implementation.

Additionally, the results of this study suggest that there is a statistically significant relationship between the principal's Peak Stage of Concern and the teacher's Peak Stage of Concern. The principal's level of readiness to implement the innovation in their school building has a positive influence on their teachers' readiness to implement in their classroom. This relationship is additional evidence that supports the need for school principals to become active and ongoing participants in any new program that is being implemented in their school building. How quickly and by what methods they proceed is determined by their change facilitator styles, as shown by numerous studies (Entrekin 1991; Hall & Hord, 2011; Hall, Rutherford, Hall, and Huling 1984; Hougen 1984; Schiller 1991; Trohoski, 1984).

Finally, this study identified some data that should be a concern for the stakeholders and supporters of Indian Education for All implementation in the State of Montana. On one hand, this study's results validate the planning and organization of the three-tiered professional development model for IEFA. The data also revealed the need for leadership support for IEFA by the school's principal.

However, this study's data revealed three points of concern that are highlighted in the conclusions, but are also addressed in the implications section later in this chapter. First, the large majority of teachers and principals in this sample are not ready to either implement nor support IEFA implementation in their schools. When 92% of the teachers are within Stages 0 to 2, while 90.9% of the principals are also within these same stages, this indicates that these educators have major concerns that are keeping them from moving forward with IEFA. This issue is also evident in the amount of time that teachers and principals report implementing IEFA in their classrooms/schools. Secondly, about one-fourth of both teachers (26.3%) and principals (24.2%) openly admit to spending zero hours per week on IEFA implementations. Thirdly, the

perception that principals have done "nothing" to advocate or support IEFA implementation and growth in their schools is prevalent in this sample. Teacher comments that principals have done nothing in the open-ended questions five through seven, made up 23.1%, 29.0%, and 40.0% of the comments respectively. These issues illustrate what De La Mare (2010) and Elser (2010) predicted, and Sherlock (2004) ruled in Columbia Falls School District v. State of Montana about the challenges that IEFA faced in our state.

The results of this study reflect what was presented in earlier chapters about what is reported in the literature regarding the problems of professional development practices not translating to improved classroom implementation. This study identifies the relationships that will have a positive influence on moving teachers along in readiness and implementation of new programs. However, the majority of teachers in this study (37.7%) stated they had not received official training on the state-wide mandated program of Indian Education for All. How then does an educational leader reconcile the results of this study, which provides information about what they can do to support teachers, but also illustrates that these positive supports have not been implemented? Numerous studies have indicated the difficulty in implementation of mandates (Guskey, 2000; Hall & Hord, 2011; Johnson, 2004; Trainor, 2007; Zimmerman & May, 2003). In the next section, recommendations for both the practitioner and for future research are presented, based on the implications for an educational leader's support for professional learning and change in their schools.

Recommendations

As already discussed in Chapter One, there are many factors that impact staff development initiatives. Change is a dynamic, complex process that requires time and support systems (Ali, 2004; Darling-Hammond & Richardson, 2009; Hall & Rutherford, 1976; Sparks, 2000). This study set out to address three things administrators should be able to answer when moving forward with any new program or initiative: (a) Does their leadership and support have a impact on preparing teachers to implement educational initiatives in the classroom?; (b) What specific concerns does their teaching staff have about the initiative?; and (c) What are the next steps needed for follow-up professional development and support? This study was designed to address the problem of principals who risk wasting time, money, and having important educational initiatives wane because of the lack of proper supports. The researcher suggests the following recommendations to assist both educational practitioners (i.e. teachers, administrators, and other interested educators) and researchers in addressing this problem.

Recommendations for the Practitioner

School principals, district administrators, directors of the state's regional educational service agencies (RESA's), the Montana Office of Public Instruction, and anyone responsible for school administrator development should focus their attention on the following things: (a) the use of a multi-tiered professional development model; (b) the use of the Concerns Based Adoption Model (CBAM), especially the Stages of Concern (SoC); and (c) the emphasis of the principal's participation in, and support of, professional learning alongside their staff. These three key structures will assist school leaders in addressing the vital component of professional development for change to occur (Guskey, 2000; Hargreaves & Fullan, 1998; Hunter, 1990; Senge, 1990), and to help reduce the multiple factors that typically lead to failed implementation

approaches (DuFour & Marzano, 2011; Fullan, 2003, 2010; Killion, 2002; Reeves, 2009, 2010; Senge, 1990; Wagner et al., 2006).

The results from this study revealed that there was a statistically significant relationship between the highest level of training that a teacher completes and their readiness (Peak Stage of Concern) and their actual time implementing the innovation in their classroom. The higher the level of training a teacher participates in a focused and on-going manner, the better prepared they are to implement, and this translates into more hours of actual implementation in the classroom. Meyer (2006) illustrated the effectiveness of a multi-leveled professional development approach, that was similar to the one used with Montana's Three-tiered model (MNCESR, 2006; MT OPI, 2008). The development and use of the three-tiered professional development model that the State of Montana applied to multiple state-wide mandates, including Indian Education for All, should continue to function as a planning and roll-out structure for new programs.

Educational leaders should also utilize the tools and processes from the Concerns Based Adoption Model (CBAM). The use of CBAM and the Stages of Concern Questionnaire (SoCQ) should become more common in the school leader's tool box. The use of the Stages of Concern will assist the school leader in measuring the progress of their staff during the change process. The existing research on the effectiveness of utilizing these models is well documented (George, Hall & Stiegelbauer, 2008; Hall & Hord, 1981, 2011; Hall, Wallace & Dossett, 1973; Loucks-Horsley, 1997; Zmuda, Kuklis, & Kline, 2004). Knowing where their staff members are along the Stages of Concern spectrum will assist school leaders in determining a teacher's readiness to implement new programs, and in identifying next steps in professional development.

Professional development providers and district administrators must emphasize the importance of the school principal's active participation in professional learning events, and

actively support the ongoing development of teachers in any new program or initiative. A principal's active role in professional development has been shown to be an essential part of any change initiative (Devin & Shoop, 2007; Drago-Severson, 2004; Fullan, 2005; Hall & Hord, 2011; Joyce and Showers, 1995; Sergiovanni, 1992, 1994). This study revealed that the more actively involved a principal is with the professional learning and support of a new program, the more actively involved their staff members become in that initiative.

Recommendations for Further Research

Future studies should consider the model used in this study which of examined the professional learning practices of teachers and principals, and connected it to the outcomes of implementation in the classroom. It is further recommended that this study be expanded to a larger group of Montana teachers and principals, not only for evaluating growth in the implementation of IEFA, but also for other major state-wide mandates like the Montana Common Core Standards, the Striving Readers Grant, or the Response to Intervention process to name a few.

As noted in Chapter Two, the correlation between CBAM's Stage of Concern data to that of the Learning Forward's Self-Assessment Inventory 2 (SAI2) had not been attempted before. As the NSDC Standards (2004) evolved into their current form, the validity and reliability of the Learning Forward (2011) Standards, and the use of the SAI2 (2013) have been discovered by numerous studies (Guskey and Sparks, 1996; Mizell, 2001; Parker, 2003; Presler, 2006; Racek, 2008; Richardson, 2003). It is recommended that continued research be done to investigate the relationships between the Stages of Concern and all of the standards of professional learning as developed by Learning Forward and measured by the full SAI2 survey. Both of these valid and reliable models address different aspects of professional learning and growth, but they do so as if

they were two arms of the same body. Bringing the data together from both models would be an additional benefit to the educational research.

Finally, it is recommended that further examination and research be done on the relationship between the principal's Peak Stage of Concern and the teacher's Peak Stage of Concern. The data from this study revealed that there was a statistically significant relationship between these two variables. There are many factors that might influence the growth of teacher in any new program. It is logical to assume that these factors exist in the structure identified to be "Implementation Bridges" as already identified in existing research (Hall & Hord, 2011; Hall, Loucks, Rutherford & Newlove, 1975; Hord & Huling-Austin, 1986; Reeves, 2004, 2010). Exploration and close examination of the relationship between these implementation bridges that principals help to create are of benefit to the field of educational research and school reform initiatives.

Summary

This chapter applied the results reported in Chapter Four to the five research questions. Examining the over-arching research question required nine different hypotheses. The data revealed that of these nine hypotheses, only one (Hypothesis Eight) had an evident relationship between the principal's highest level of training and the teacher's highest level of training. Research questions Two through Five provided additional insight to the study. Research Questions Two and Three revealed that there is a statistically significant relationship between the highest level of training a teacher completes and their readiness to implement and their actual implementation in the classroom. Research Question Four revealed a statistically significant relationship between a principal's and a teacher's Peak Stage of Concern. And finally Research Question Five revealed that there were no statistically significant relationships between a

principal's Peak Stage of Concern or their highest training level and the teacher's time implementation.

Conclusions were presented, and discussed the relationships that the data revealed to be statistically significant. Additional findings were presented related to the demographics and qualitative data. The concern was discussed that this study validated the importance of the multi-tiered professional development model, but that the majority of teachers identified never participating in an official training. Another concern that was discussed is that the majority of teachers and principals were not ready for implementation of IEFA, and that about one-fourth of both groups admitted to not spending any time on implementing this state mandated initiative.

The recommendations were suggested to educational leaders for practical application, along with recommendations for future studies. Suggestions were offered to educational leaders for the practical use of the three-tiered professional development model as a way to positively impact the teacher's readiness to implement new programs and initiatives, and their actual time in doing so in their classroom. The CBAM and the Stages of Concern models are a practical means to monitor growth and progress of a new program, and this model can help assist them in understanding next steps for further training that staff members will need. Finally, it is recommended that future studies examine the roll-out and implementation of other major state-wide initiatives such as Common Core State Standards, the Striving Readers Grant, and the Response to Intervention programs. This could be a benefit to the field of educational research.

Reflection on the Study

This study had less to do about the Montana Indian Education for All initiative, and had more to do about investigating how educational leaders could effectively implement and provide positive leadership for new programs and initiatives at any level whether building, district, or state. The state-wide mandate of Indian Education for All helped to set the context of this study for two main reasons: (a) it was the one recent, state-wide mandated initiative in which all educators of Montana shared a responsibility; and (b) enough time has passed to allow teachers to be trained, resources to be purchased, and concerns of the principal and teacher to be addressed. Second, Indian Education for All was chosen because of my responsibility of the past 11 years supervise the budgeting, planning, and implementation of professional development of Indian Education for All. I have been interested in knowing whether what we have been doing has been effective in preparing the classroom teacher for implementation. And, if there are effective methods and approaches of leadership in preparing and supporting teachers, then I wanted to help identify these so that educational leaders can maximize their time, money, and efforts.

There are three major concerns that have emerged from the results of this study that do have implications regarding Indian Education for All implementation in Montana. The first concern is the large percentage of teachers and principals who have not moved along the Stages of Concern continuum regarding the Indian Education for All initiative. The results of this study indicated that the majority of educators either did not worry at all about implementing IEFA, or they had not invested enough time and effort into their own professional learning to address any concerns about needing more information, personal issues, or management to move forward with much effectiveness. Secondly, there is a major disconnect between the principals' own support

and modeling of good professional learning practices for their staff, and the teachers' perceptions that their building leader isn't doing anything at all to support Indian Education for All. The teachers' perceptions were based on varying reasons, but it was clear that many teachers voiced a sense of abandonment by their school leader in the area of support and professional learning. Finally, many educators in this study demonstrated a certain attitude that the responsibility for Indian Education for All was owned by someone else. I was surprised to see so much confusion concerning Indian Education as a part of the Elementary and Secondary Education Act (ESEA), versus Montana Indian Education for All.

The findings of this study were conclusive in two main areas of the data. First, the use of a multi-tiered professional learning model clearly has a positive impact on preparing teachers to implement new programs in their classrooms, and this readiness by the teachers to implement results in an increase of actual hours, on a weekly basis, that the new programs will be taught. In other words, as the teacher progresses in personal professional learning from a lower level of "awareness" towards professional learning that supports "implementation" and "sustainability", they become better prepared, more confident, and more likely to attain a higher number of hours in implementing the new program. Secondly, one of the positive influences on increasing the likelihood that teaching staff would participate in multiple levels of professional development, was the willingness of the building principal to also attend multiple levels of professional development. This study's findings validate this, but also compliment the findings of the Jennings Initiative, (described in the Chapter Two literature review) which illustrated the positive impact of multi-tiered professional learning plans.

Finally, I plan to utilize the findings of this study in my own professional practices as a district-level supervisor of professional development practices, but also as state-wide educational

leader. The results of this study must be shared at the state, district, and building levels with the implications that this knowledge will assist in making program implementation more effective. The teams of educators who are responsible for the strategic planning and implementation of major initiatives and programs need to become more appreciative of the CBAM model, especially the Stages of Concern, but also of the results from this study. I plan to bring this knowledge to the strategic planning table in my own district, but also to the larger leadership team. In my state-wide leadership roles, whether as a member of School Administrators of Montana (SAM), a Past-president of Montana ASCD, or a current board member of one of the state's five Regional Educational Service Agencies (RESAs), I plan to share the results of this study and recommend that state organizations, like districts, begin utilizing this knowledge. I will recommend that those having an influence on school administrator development recognize the disadvantages of ignoring this study's results. Ignoring the results would be a waste of valuable time and money, as well as, letting important initiatives and programs fail.

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Appendix A: Learning Forward's Standards for Professional Learning (2011)

Standards summary

Standards for Professional Learning	Core elements of each standard
LEARNING COMMUNITIES: Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment.	• Engage in continuous improvement. • Develop collective responsibility. • Create alignment and accountability.
LEADERSHIP: Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate, and create support systems for professional learning.	• Develop capacity for learning and leading. • Advocate for professional learning. • Create support systems and structures.
RESOURCES: Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring, and coordinating resources for educator learning.	• Prioritize human, fiscal, material, technology, and time resources. • Monitor resources. • Coordinate resources.
DATA: Professional learning that increases educator effectiveness and results for all students uses a variety of sources and types of student, educator, and system data to plan, assess, and evaluate professional learning.	• Analyze student, educator, and system data. • Assess progress. • Evaluate professional learning.
LEARNING DESIGNS: Professional learning that increases educator effectiveness and results for all students integrates theories, research, and models of human learning to achieve its intended outcomes.	• Apply learning theories, research, and models. • Select learning designs. • Promote active engagement.
IMPLEMENTATION: Professional learning that increases educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long-term change.	• Apply change research. • Sustain implementation. • Provide constructive feedback.
OUTCOMES: Professional learning that increases educator effectiveness and results for all students aligns its outcomes with educator performance and student curriculum standards.	• Meet performance standards. • Address learning outcomes. • Build coherence.

Appendix B – Online Survey Instrument

Research Study on Indian Education for All Support

Welcome. You are invited to participate in a research project about teachers' and principals' concerns regarding Indian Education for All. This online survey should take about 20 to 30 minutes to complete. Participation is voluntary, and responses will be kept confidential to the degree permitted by the technology being used.

You have the option to not respond to any questions that you choose. Participation or nonparticipation will not impact your relationship with the University of Montana. Submission of the survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

If you have any questions about the research, please contact the Principal Investigator, Chris Olszewski, via email at chris_olszewski@umontana.edu or the faculty advisor, Dr. William McCaw, at Bill.McCaw@mso.umt.edu. If you have any questions regarding your rights as a research subject, contact the UM Institutional Review Board (IRB) at (406) 243-6672.

Please print or save a copy of this page for your records.

*I have read the above information and agree to participate in this research project.

Research Study on Indian Education for All Support

Instructions

There are four parts to the survey:
Part 1 – Concerns about Indian Education for All
Part 2 - Demographics
Part 3 - Leadership Support for Professional Learning
Part 4 - Open-ended Questions

The survey should take between 20-30 minutes to complete. Remember, you can choose not to answer any question, and can quit at any time.

Research Study on Indian Education for All Support

Part 1: Concerns about Indian Education for All

The purpose of the following questions is to determine what Montana educators are thinking and/or concerned about regarding Indian Education for All.

The questions were developed from typical responses of teachers and principals who ranged from having no knowledge at all about Indian Education for All to many years' experience implementing it. Therefore, many of the items on this questionnaire may appear to be of little relevance or irrelevant to you at this time.

The answer scale ranges in intensity from 0 to 7. For the completely irrelevant items, please select "0" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale.

Please remember to respond to each item in terms of your present concerns about your involvement or potential involvement with Indian Education for All.

1. I am concerned about students' attitudes toward Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7
☐	☐	☐	☐	☐	☐	☐	☐

2. I now know of some other approaches that might work better.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7
☐	☐	☐	☐	☐	☐	☐	☐

3. I am more concerned about another program than Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7
☐	☐	☐	☐	☐	☐	☐	☐

4. I am concerned about not having enough time to organize myself each day.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7
☐	☐	☐	☐	☐	☐	☐	☐

5. I would like to help other faculty in their use of Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7
☐	☐	☐	☐	☐	☐	☐	☐

6. I have a very limited knowledge of Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7
☐	☐	☐	☐	☐	☐	☐	☐

7. I would like to know the effect of reorganization around Indian Education for All has on my professional status.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

8. I am concerned about conflict between my other interests and my responsibilities for Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

9. I am concerned about revising my use of Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

10. I would like to develop working relationships with both our faculty and outside faculty using Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

11. I am concerned about how Indian Education for All affects students.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

12. I am not concerned about Indian Education for All at this time.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

13. I would like to know who will make the decisions in implementing Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

14. I would like to discuss the possibility of using Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

15. I would like to know what resources are available for Indian Education for All

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

16. I am concerned about my inability to manage all that Indian Education for All requires.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

17. I would like to know how my teaching or administration is supposed to change because of Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

18. I would like to familiarize other departments or persons with the progress of Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

19. I am concerned about evaluating my impact on students.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

20. I would like to revise Indian Education for All's approach.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

21. I am preoccupied with things other than Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

22. I would like to modify our use of Indian Education for All based on the experiences of our students.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

23. I spend little time thinking about Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

24. I would like to excite my students about their part in Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

25. I am concerned about time spent working with nonacademic problems related to Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

26. I would like to know what the use of Indian Education for All will require in the immediate future.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

27. I would like to coordinate my efforts with others to maximize Indian Education for All's effects.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

28. I would like to have more information on time and energy commitments required by Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

29. I would like to know what other faculty are doing for Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

30. Currently, other priorities prevent me from focusing my attention on Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

31. I would like to determine how to supplement, enhance, or replace Indian Education for All implementation.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

32. I would like to use feedback from students to change Indian Education for All implementation.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

33. I would like to know how my role will change when I am using Indian Education for All.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

34. Coordination of tasks and people is taking too much of my time.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 6	Very true of me now - 7	Very true of me now - 7

35. I would like to know how Indian Education for All is better than what we have now.

Irrelevant - 0	Not true of me now - 1	Not true of me now - 2	Somewhat true of me now - 3	Somewhat true of me now - 4	Somewhat true of me now - 5	Very true of me now - 6	Very true of me now - 7

Research Study on Indian Education for All Support

Part 2: Demographics

The next set of questions are about you as an educator and your experiences with Indian Education for All.

1. What are you total years teaching?

2. Which category below includes your age?

- 20-29
- 30-39
- 40-49
- 50-59
- 60 or older

3. About how long have you been at your current school?

Years

Months

4. Are you male or female?

- Male
- Female

5. What is the highest degree you have received?

- Associate degree
- Bachelor degree
- Masters degree
- Doctoral Degree

6. Indicate your total years:

Teaching

Administration

7. How long have you been involved in implementing Indian Education for All?

- Never
- 1 year
- 2 years
- 3 years
- 4 years
- 5 years or more

8. With regard to Indian Education for All implementation, estimate how many hours per week that you spend with your students.

- Zero hours
- 1 to 5 hours
- 6 to 10 hours
- 11+ hours

9. In your use of Indian Education for All, do you consider yourself to be a:

- Non-user
- Novice
- Intermediate User
- Old Hand
- Past User

10. Have you received formal training in Indian Education for All?

- Yes
- No

Research Study on Indian Education for All Support

1. Which levels of Indian Education for All training have you completed? (Mark all that apply)

Descriptors

Level 1 - Awareness: Participants learn the basic history and obligations of Indian Education for All, a basic overview of the Seven Essential Understandings of Indian Education for All, and basic location of already created resources.

Level 2 - Implementation: Participants learn various infusion models and strategies through workshops or limited professional learning events. Lesson planning and unit development are based primarily on the infusion of already created resources.

Level 3 - Sustainability: Participants are supported by one or more of the following: a) Instructional coach or mentoring teacher supports implementation in the classroom; b) Ongoing training provided through a professional learning community or training-of-trainers model; c) Focus on personal development of units and lessons.

- Level One - Awareness
- Level Two - Implementation
- Level Three - Sustainability

2. Is your school currently in the first or second year of use of some major innovation or program other than Indian Education for All?

- Yes
- No

If yes, please list the title of the innovation or program:

Research Study on Indian Education for All Support

Part 3: Leadership Support for Professional Learning

The purpose of the following questions is to research the level of leadership support for professional learning, more commonly known as professional development. Some schools have a single principal as its leader, while other schools have leadership teams (principals, associate principals, teacher leaders). Please mark the responses that most reflect your experience at your school.

1. My school's leader(s) consider all staff members to be capable of being professional learning leaders.

Never - 0	Seldom - 1	Sometimes - 2	Frequently - 3	Always - 4
☐	☐	☐	☐	☐

2. My school's leader(s) regard professional learning as a top priority for all staff.

Never - 0	Seldom - 1	Sometimes - 2	Frequently - 3	Always - 4
☐	☐	☐	☐	☐

3. My school's leader(s) cultivate a positive culture that embraces characteristics such as collaboration, high expectations, respect, trust, and constructive feedback.

Never - 0	Seldon - 1	Sometimes - 2	Frequently - 4	Always - 4
☐	☐	☐	☐	☐

4. My school's leader(s) are active participants with other staff members in the school's professional learning.

Never - 0	Seldom - 1	Sometimes - 2	Frequently - 3	Always - 4
☐	☐	☐	☐	☐

5. My school's leader(s) advocate for resources to fully support professional learning.

Never - 0	Seldom - 1	Sometimes - 2	Frequently - 3	Always - 4
☐	☐	☐	☐	☐

6. My school's leader(s) provide teachers with equitable resources to support our individual and collaborative goals for professional learning.

Never - 0	Seldom - 1	Sometimes - 2	Frequently - 3	Always - 4
☐	☐	☐	☐	☐

7. My school's leader(s) speak about the important relationship between improved student achievement and professional learning.

Never - 0	Seldom - 1	Sometimes - 2	Frequently - 3	Always - 4
☐	☐	☐	☐	☐

Research Study on Indian Education for All Support

Part 4: Open-Ended Questions

This final section of the survey consists of seven open-ended questions regarding Indian Education for All implementation. Unlike the earlier sets of questions, these questions are designed to allow you to share your thoughts in your own words.

1. You are a:*

- Teacher
- Principal

Other (please specify)

*Note for Committee – This question applies answer logic that will take participants to a different set of questions based on their current role. The next page of questions are formatted for the teacher, while the last page displays the principal questions.

Research Study on Indian Education for All Support

1. When I think about implementing Indian Education for All in my classroom, I am most concerned about...

2. How has Indian Education for All implementation in your classroom affected you as a teacher?

3. How does Indian Education for All implementation affect student learning in your classroom?

4. What kind of support is needed in order to continue the implementation of Indian Education for All in your classroom?

5. In general, what has your principal done to advocate for Indian Education for All professional learning in your school?

6. What are the support systems your principal has created for Indian Education for All implementation in your school?

7. What has your principal done to develop teacher capacity for learning about Indian Education for All and its implementation in your school?

Research Study on Indian Education for All Support

1. When I think about the implementation of Indian Education for All in my school, I am most concerned about...

2. How has Indian Education for All implementation in your school affected you as a principal?

3. How does Indian Education for All implementation affect student learning in your school?

4. What kind of support is needed in order for the implementation of Indian Education for All to continue in your school?

5. In general, what have you done to advocate for Indian Education for All professional learning in your school?

6. What are the support systems you have created for Indian Education for All implementation in your school?

7. What have you done to develop your own knowledge and capacity to lead Indian Education for All implementation in your school?

Appendix C – The Stages of Concern About an Innovation

Stages of Concern			Description of Concern
Impact	6	Refocusing	The individual focuses on exploring ways to reap more universal benefits from the innovation, including the possibility of making major changes to it or replacing it with a more powerful alternative.
	5	Collaboration	The individual focuses on coordinating and cooperating with others regarding use of the innovation.
	4	Consequence	The individual focuses on the innovation's impact on students in his or her immediate sphere of influence. Considerations include the relevance of the innovation for students; the evaluation of student outcomes, including performance and competencies; and the changes needed to improve student outcomes.
Task	3	Management	The individual focuses on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling dominate.
Self	2	Personal	The individual is uncertain about the demands of the innovation, his or her adequacy to meet those demands, and/or his or her role with the innovation. The individual is analyzing his or her relationship to the reward structure of the organization, determining his or her part in decision making, and considering potential conflicts with existing structures or personal commitment. Concerns also might involve the financial or status implications of the program for the individual and his or her colleagues.
	1	Informational	The individual indicates a general awareness of the innovation and interest in learning more details about it. The individual does not seem to be worried about himself or herself in relation to the innovation. Any interest is in impersonal, substantive aspects of the innovation, such as its general characteristics, effects, and requirements for use.
Unconcerned	0	Unconcerned	The individual indicates little concern about or involvement with the innovation.

Source: Figure 2.1, George et al., (2008)

Appendix D – Permission Letters and Forms

ADVANCING RESEARCH
SEDL
IMPROVING EDUCATION

SEDL License Agreement

To: Chris M. Olszewski (Licensee)
Director of Curriculum & Instruction
Great Falls Public Schools
1100 4th Street South
Great Falls, MT 59405

From: Nancy Reynolds
Information Associate
SEDL
Information Resource Center-Copyright Permissions
4700 Mueller Blvd.
Austin, TX 78723

Subject: License Agreement to reprint and distribute SEDL materials

Date: March 1, 2013

Thank you for your interest in using the **Stages of Concern Questionnaire** (SoCQ 075) and **Figure 2.1.The Stages of Concern About an Innovation,** page 8, in *Measuring Implementation in Schools: Stages of Concern Questionnaire* published by SEDL in 2006 and written by Archie A. George, Gene E. Hall, and Suzanne M. Stiegelbauer. In this publication, the SoCQ 075 appears as Appendix A, pages 79-82; it is also available in electronic format as SEDL's *Stages of Concern Questionnaire (SoCQ) Online*, and in the book *Taking Charge of Change*, revised ed., published in 2006 and written by Shirley M. Hord, William L. Rutherford, Leslie Huling, and Gene E. Hall, on pages 48-49.

The SoCQ 075 and the figure will be referred to as the "works" in this permission agreement. SEDL is pleased to grant permission for use of the works cited above by the Licensee for a dissertation titled *The Significance of Administrative Support for the State-Wide Innovation of Montana Indian Education for All* at the University of Montana in Missoula. The following are the terms, conditions, and limitations governing this limited permission to reproduce the works:

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Voice: 800-476-6861
Fax: 512-476-2286
www.sedl.org
4700 MUELLER BLVD., AUSTIN, TX 78723

SEDL License Agreement, p.2

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Thank you, again, for your interest in using SEDL's **Stages of Concern Questionnaire** (SoCQ 075) and the figure of **The Stages of Concern About an Innovation**. If you have any questions, please contact me at 800-476-6861, ext. 6548 or 512-391-6548, or by e-mail at nancy.reynolds@sedl.org.

Sincerely,

Nancy Reynolds — Nancy Reynolds for SEDL

March 1, 2013 — Date signed

Agreed and accepted:

Signature: Chris M. Olszewski

3/1/2013 — Date signed

Printed Name: Chris M. Olszewski

May 4, 2013

Chris Olszewski
Great Falls Public Schools
1100 4th Street South
Great Falls, MT 59405

Chris,

Learning Forward is pleased to grant you permission to use these items in your doctoral research study and publish in your dissertation.

Please ensure that the following citation and credit line appear with your material. Used with permission of Learning Forward, www.learningforward.org. All rights reserved.

"Summary table on page 61," by Learning Forward, *Standards for Professional Learning*, 2011.
"Seven Leadership questions from the SAI2 survey," by Learning Forward, 2013.
Following questions to be used:
a. My school's leaders consider all staff members to be capable of being professional learning leaders.
b. My school's leaders regard professional learning as a top priority for all staff.
c. My school's leaders cultivate a positive culture that embraces characteristics such as collaboration, high expectations, respect, trust, and constructive feedback.
d. My school's leaders are active participants with other staff members in the school's professional learning.
e. My school's leaders advocate for resources to fully support professional learning.
f. My school's leaders provide teachers with equitable resources to support our individual and collaborative goals for professional learning.
g. My school's leaders speak about the important relationship between improved student achievement and professional learning.

Thank you for your interest in our work.

Sincerely,

Christy Colclasure

Christy Colclasure
Members Service Manager
Learning Forward
504 South Locust Street
Oxford, OH 45056
Phone 513-523-6029 ext 221

Dear Superintendent,

I am a doctoral student in Educational Leadership at The University of Montana. I am in the process of completing the final requirement of my doctoral program, and am requesting your district's participation in my study. My research is focused upon exploring the relationships that teachers and principals have when it relates to Indian Education for All. I am particularly interested in exploring the role that a principal plays in effecting the implementation efforts of teachers for Indian Education for All.

To provide the data necessary for the completion of this research I am respectfully requesting that you allow me the opportunity to survey the principal and teachers of Name Elementary School. If you grant permission, the principal and teachers will be asked to a survey that will take approximately 20 to 30 minutes to complete.

All information provided will be kept strictly confidential with no individual information that would allow anyone to be able to identify who completed the survey. To assure this confidentiality all of the surveys are coded without any overt identifiers of the individual, the school or the principal. I will be the only person who will have access to the key to the codes. These codes will be in a locked file cabinet until completion of the study. After the analysis of the data is completed all keys that connect the codes to any district, schools or individuals will be destroyed. Additionally, none of the findings of this research will be reported in a manner that would allow any specific school district, school, principal or teacher to be identified. The purpose of this research is to provide an overview based upon data retrieved from throughout the state of Montana and will not be used to provide information on any individual district or school.

I recognize how valuable your time is, and appreciate your consideration of this request. I will be contacting you shortly via email to ask for permission to contact your principal and teacher. If you have any questions regarding the completion of the survey don't hesitate to give me a call at (406) 781-0408 or send me an e-mail at chris_olszewski@gfps.k12.mt.us

With Gratitude,

Chris M. Olszewski
421 Riverview Dr E.
Great Falls, MT 59404

Dear Principal,

I am a doctoral student in Educational Leadership at The University of Montana. I am in the process of completing the final requirement of my doctoral program, and am requesting your participation in my study. Your voluntary participation has been approved by your superintendent. My research is focused upon exploring the relationships that teachers and principals have when it relates to Indian Education for All. I am particularly interested in exploring the role that a principal plays in effecting the implementation efforts of teachers for Indian Education for All.

To provide the data necessary for the completion of this research I am respectfully requesting that you complete an on-line survey. I anticipate that the survey will take approximately 20 to 30 minutes for you to complete. If you are willing to participate in this study please complete the short questionnaire that is on the back of this letter. After completing this questionnaire, simply put it in the self addressed, postage paid envelope that is attached and mail it as soon as is convenient for you. Upon receiving your permission to be a part of this study I will then send you an e-mail that has a link to the survey.

All information provided will be kept strictly confidential with no individual information that would allow anyone to be able to identify who completed the survey. To assure this confidentiality all of the surveys are coded without any overt identifiers of the individual, the school or the principal. I will be the only person who will have access to the key to the codes. These codes will be in a locked file cabinet until completion of the study. After the analysis of the data is completed all keys that connect the codes to any district, schools or individuals will be destroyed. Additionally, none of the findings of this research will be reported in a manner that would allow any specific school district, school, principal or teacher to be identified. The purpose of this research is to provide an overview based upon data retrieved from throughout the state of Montana and will not be used to provide information on any individual district or school.

Thank you for your willingness to be involved in this study. If you have any questions regarding the completion of the survey don't hesitate to give me a call at (406) 781-0408 or send me an e-mail at chris_olszewski@gfps.k12.mt.us. If you wish to receive the results of my research please let me know and I will send you an electronic version of my completed dissertation.

With Gratitude,

Chris M. Olszewski
421 Riverview Dr E.
Great Falls, MT 59404

Dear Teacher,

I am a doctoral student in Educational Leadership at The University of Montana. I am in the process of completing the final requirement of my doctoral program, and am requesting your participation in my study. Your voluntary participation has been approved by your superintendent. My research is focused upon exploring the relationships that teachers and principals have when it relates to Indian Education for All. I am particularly interested in exploring the role that a principal plays in effecting the implementation efforts of teachers for Indian Education for All.

To provide the data necessary for the completion of this research I am respectfully requesting that you complete an on-line survey. I anticipate that the survey will take approximately 20 to 30 minutes for you to complete. If you are willing to participate in this study please complete the short questionnaire that is on the back of this letter. After completing this questionnaire, simply put it in the self addressed, postage paid envelope that is attached and mail it as soon as is convenient for you. Upon receiving your permission to be a part of this study I will then send you an e-mail that has a link to the survey.

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Thank you for your willingness to be involved in this study. If you have any questions regarding the completion of the survey don't hesitate to give me a call at (406) 781-0408 or send me an e-mail at chris_olszewski@gfps.k12.mt.us. If you wish to receive the results of my research please let me know and I will send you an electronic version of my completed dissertation.

With Gratitude,

Chris M. Olszewski
421 Riverview Dr E.
Great Falls, MT 59404