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TEACHER, LEADERSHIP, AND CURRICULUM FACTORS PREDICTIVE OF STUDENT ACHIEVEMENT IN INDIAN EDUCATION FOR ALL

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Teacher, Leadership, and Curriculum Factors Predictive of Student Achievement in Indian Education for All

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This study examines the teacher, leader, and curriculum variables predictive of student achievement in Indian Education for All (IEFA). IEFA, a Montana educational mandate based on Montana constitutional law, was first funded in 2005, and little research had previously been conducted on the effectiveness of implementation efforts. While compulsory, implementation had been piecemeal and wrought with misunderstanding, differences in opinion, prejudice, and questions about its legitimacy. The challenges inherent in the implementation of an ambiguous educational reform with no state-adopted curriculum or benchmarks for student achievement have become evident. With the dearth of research, it was not known how well students were learning what was mandated, nor was it known which precise variables impact or measure this learning. To determine this, second through fifth grade elementary school teachers and school leaders located in Missoula County completed a survey questionnaire, and Missoula County fifth grade students completed a student assessment based on the Essential Understandings of Montana Indians and the Montana Standards for Social Studies. Descriptive data provided information on mean fifth grade student IEFA scores, teacher and leader demographics, professional development participation, and implementation needs, and frequency of use of materials provided to all schools by the Montana Office of Public Instruction. Multiple regression analysis was used to determine if relationships exist between the predictor variables (teacher, leader, and curriculum variables) and the outcome variable (student achievement). However, none of the independent variables was found to have significant predictive value. Educators, including the Montana Office of Public Instruction, may use these findings to determine strategies that might most successfully impact IEFA implementation and to direct the course of further research.

DEDICATION

I dedicate this dissertation to my family, especially:

My father, Dr. Arnold Lipkind, for your mentorship. Your continual support (financial and academic) and unwavering confidence in me compelled me to finish.

My mother, Linda Lipkind, whose constant encouragement (and editing) helped bring this project to fruition.

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CHAPTER ONE: STATEMENT OF THE PROBLEM

The constitution of the State of Montana, ratified in 1972, includes a unique mandate that guarantees the preservation of the cultural heritage of American Indians, Montana's first people. Article X, section 1(2) is part of the state's education law, making the recognition and preservation of American Indian cultures the purview of Montana's education system. Having it in the constitution, however, proved insufficient to integrate Indian education into the Montana public school curriculum; rather, this important goal went virtually unrealized until the passage of House Bill 528 in 1999. MCA 20-1-501, generally referred to as Indian Education for All (IEFA), delineates what implementation of the constitutional mandate means. IEFA specifies that all school personnel learn about Montana's tribes and all children be taught about the history, culture, and contemporary life of Montana's Indian people. Through these efforts, all of Montana's citizens, young and old, Indian and non-Indian, will ultimately develop an understanding and appreciation of Indian culture as well as improved relationships and interaction with Indian parents and students.

Following the passage of the IEFA law, tribal leaders around the state met to develop the seven Essential Understandings that have formed the basis of curriculum development efforts. The Essential Understandings address four areas of study—(a) history, (b) culture, (c) diversity, and (d) sovereignty of Montana Indians. Legislative funding for IEFA implementation began in 2005, allowing the Office of Public Instruction's (OPI) Indian Education Department to begin a strong push for integration of Native content into curriculum in schools around the state. This effort included creating and disseminating curriculum materials to schools, funding grants for schools and

individuals to create curriculum, hosting workshops and conferences around the state, and funding IEFA research and resource development. However, the unique nature of IEFA has made implementation extremely challenging.

Unlike other content areas, Indian Education for All does not have a set of state standards to guide school districts or teachers in its implementation. It lacks a process for measuring student progress, and benchmarks for student achievement at each grade level are just beginning to show up in content areas; indeed, IEFA lacks all of the structure and organization of a core curricular area. Nonetheless, teachers are required by law to teach it, and students are either learning or not learning the content.

To date, little research has been conducted in the area of Indian Education for All implementation. Most research has been qualitative in nature, reporting teachers' experiences with implementation, their personal growth as they struggle to learn and implement the new content, or their observations of students' growth as a result of the integration of IEFA content (Ingram, 2006; Ngai & Allen, 2007).

Four years of funding and integration efforts have passed and in that time no consensus as to what implementation should look like has emerged. One-time and yearly per-student allocations have been used in a variety of ways: to purchase materials and resources, hire visiting cultural experts, or to provide professional development opportunities for teachers. IEFA funding has also been spent in unanticipated ways: rolled into general funds to cover shortfalls, parceled out to individual district schools to spend at their discretion, used to purchase technology and to supplement staff salaries. IEFA funding has been confused with funding for closing the achievement gap, resulting in monies being spent for tutors and other activities that support student achievement (T.

Veltkamp, personal communication, December 26, 2008). Around the state, in schools large and small, rural and urban, reservation and non-reservation, implementation of IEFA varies greatly.

The current educational context no doubt accounts for some of the difficulty schools face in properly implementing IEFA. For example, teachers are faced with a myriad of other school, district, state, and federal requirements, such as implementing new curriculum adoptions, preparing students for standardized tests in reading and mathematics to meet Annual Yearly Progress (AYP), differentiating instruction for students with diverse needs, implementing Response to Intervention (RTI), and teaching students from low socioeconomic backgrounds whose basic needs are not met. Given all these challenges, it is unclear how high of a priority IEFA implementation is for teachers; whether or not students are developing the intended understandings about and appreciation of Montana Indian people as required by the Indian Education for All Act is an open question. Successful implementation demands that we come to grips with both factors that impede and factors that facilitate IEFA implementation.

Additionally, the literature on school reform sheds light on important variables related to systematic curriculum implementation. These variables fall under three basic categories; teacher, leadership, and curriculum variables. *Teacher variables* that influence student achievement include the teacher's commitment to the moral purpose of teaching, his or her classroom curriculum design, participation in effective professional development, and familiarity with available instructional resources. Striving to make a difference in the lives of all students, making systemic changes throughout the educational institution (Fullan, 1994, 1999, Freire, 2005), sequencing, pacing, and

adapting curriculum content and shaping students' experiences with the content (Marzano, Pickering, & Pollock, 2005), and participating in appropriate professional development—all these processes are teacher-level variables which impact student achievement. How these teacher variables impact Indian Education for All implementation, most importantly student achievement, has yet to be examined by researchers in the field.

Leadership variables relevant to this study identified in the literature are principal leaders acting as agents of change, leaders' prioritization and goal setting, and leaders' provision of effective professional development opportunities. Leaders who utilize principles of change theory (Huberman & Crandall, 1983) while at the same time promoting a school atmosphere of collegiality and professionalism (Marzano, 2003) and providing staff with adequate, effective professional development opportunities (Joyce & Showers, 2002; Marzano, 2003) experience greater success implementing curriculum reforms. Additionally, when leaders clarify priorities and set goals, they can help keep school-wide changes and curriculum innovations on track and in the forefront of daily school life (Marzano, Waters, & McNulty, 2005).

Finally, *curriculum variables* are school-level factors, external to the individual, affecting implementation of new curricula as measured by student knowledge acquisition. Curriculum variables central to this study are a guaranteed and viable curriculum and access to IEFA resources. A guaranteed and viable curriculum includes both a student's opportunity to learn the content and teacher's time to acquire new skills and teach new content (Marzano, 2005). Access to Indian Education for All resources includes access to authentic print, non-print, electronic, and human resources which teachers can use for

accurate instruction in required content (T. Veltkamp, personal communication, December 26, 2008).

Content areas such as mathematics, reading, or social studies are accepted parts of the school curriculum. There is no controversy about their legitimacy as subject areas that should be taught, though there may be debate about what content should be included or the instructional methods utilized. The traditional, established curricular areas are not beleaguered with the misunderstanding, differences in opinion, and the subtle and often not-so-subtle racism that plagues IEFA. And so, while Indian Education for All is constitutionally mandated, it has not been embraced or adopted—has yet to be deemed fully legitimate—by the vast multitude of schools, teachers, and other education professionals in the State of Montana (T. Veltkamp, personal communication, December 26, 2008). Legislative decree has further emphasized that IEFA is compulsory, and provided funding for its implementation. Nevertheless, because of the unusual and controversial nature of IEFA, implementation has been complicated at times due to unanticipated conflict. Indian Education for All is a new content area, essentially unexplored, un-researched, and thus far implemented inconsistently around the state (T. Veltkamp, personal communication, December 26, 2008).

Problem Statement

Little research has been conducted in Indian Education for All implementation. Most research has been qualitative, reporting teachers' experiences with implementation, personal growth throughout the process of learning and implementing new content, or their observations of students' growth (Ingram, 2006; Ngai & Allen, 2007). Research has not been conducted on the role of the school leader in the IEFA change process. Little

research has been conducted on the curriculum variables which impact student IEFA understanding, though research conducted during the 2005-2006 school year indicated a lack of resources, including lesson plans and children's books, as a primary barrier to implementation (Lipkind, 2006). However, much headway has been made by OPI in distributing print resources and lesson plans in the last two years, so it is uncertain whether teachers still lack access to resources.

As a result of the dearth of research, it is not known which variables most significantly impact student learning of Indian Education for All content. Hence, educators do not know how best to approach Indian Education for All implementation, and there is little consistency in how teachers around the state implement the IEFA Mandate. Most teachers possess limited knowledge about, and have scant experience interacting with Indian peoples, and, as a result, are often at a loss as to how to go about integrating IEFA content into the curriculum (Lipkind, 2006).

There is no statewide-adopted curriculum or specific IEFA benchmarks for student achievement in each grade level. Teachers struggle to meet the goals of the mandate in the face of the overwhelming number of other tasks for which they are responsible. And while funding to facilitate systematic, statewide implementation has been provided by the legislature for the past three years, thus far implementation efforts have been reactive, plugging holes and scrambling to provide teachers with authentic resources, professional development, and lesson plans to facilitate integration into the different content areas.

In a nutshell, then, the problem was twofold: (a) It was not known how well students were learning what is mandated to be learned, and (b) It was not known which precise variables impact this learning.

Purpose of the Study

The purpose of this study was to explore the relationship between curricular, teacher and leadership variables, and student achievement in order to create a predictive model that will inform professional development and implementation efforts for IEFA.

Research Question

The overarching research question was:

1. Are teacher, leadership, or curriculum variables most predictive of student knowledge of Indian Education for All content? In order to fully examine this question, the following sub-questions were addressed:

Sub-questions:

A. Which teacher variables are most predictive of student knowledge of Indian Education for All content?
B. Which leadership variables are most predictive of student knowledge of Indian Education for All content?
C. Which curriculum variables are most predictive of student knowledge of Indian Education for All content?

Definitions of Terms

For the purposes of this study, the following definitions were used. The terms Indian, Native American, and American Indian were used interchangeably throughout the

writing of this dissertation. When referring to an individual tribe, tribally specific terminology was used.

Teacher Variables

Moral Purpose of Teaching refers to both making a difference in the lives of students, particularly the disadvantaged, and shaping the development of our society through the education system (Fullan, 1999; Dewey, 2004).

Classroom curriculum design is how the individual teacher sequences and paces the required content, adapts it to meet individual learner's needs, and structures students' learning activities (Marzano, 2003; Marzano, Waters, & McNulty, 2005).

Professional development participation refers to the quantity of high-quality professional learning opportunities in which teachers engage, either through self-selection or due to school or district requirements which directly support student learning (Huberman & Crandall, 1983; Joyce & Showers, 2002).

Familiarity with available IEFA resources refers to: (a) teachers' knowledge of the existence of resources provided by OPI and their schools and districts; and (b) their knowledge of how to use these resources towards their instructional objectives (T. Veltkamp, personal communication, December 26, 2008).

Leadership Variables

Approaches change implementation according to change theory refers to the school principal's utilization of a theory-based implementation plan when striving to implement new curriculum or systemic school change. A theory-based implementation plan includes establishing and communicating priorities, setting specific goals, fostering an environment of collegiality and professionalism, monitoring implementation during

and upon implementation, and providing effective professional development opportunities (Fullan, 1985; Glickman, Gordon, & Ross-Gordon, 2007; Huberman & Crandall, 1983; Joyce & Showers, 1980, 2002; Marzano, 2003; Marzano et al., 2005).

Curriculum Variables

A guaranteed and viable curriculum is one which stipulates clearly what content teachers are *required* to teach at specific grade levels: essential content must be identified, sequenced, and organized, ensuring teachers have the time to teach the content and that all students have the opportunity to learn it (Marzano et al., 2005).

Access to Indian Education for All resources refers to the existence of print and non-print resources and teachers' ability to access them, including those provided to all Montana schools by the Montana Office of Public Instruction as well as those unique to their schools and district—resources which accurately portray the history, culture, diversity, and sovereignty of Montana Indians. It includes access to human resources. Ideally, a human resource is a tribal individual who possesses knowledge about his or her tribe or tribes' history, culture, traditions, or language, and has authority and permission to share tribal knowledge (T. Veltkamp, personal communication, December 26, 2008).

Delimitations

This study included both large and small school districts located in Missoula County. It focused on the Indian Education for All implementation efforts of second through fifth grade teachers and principals. In addition, it focused on the level of fifth grade student mastery of IEFA content, specifically guided by the Essential Understandings of Montana Indians. Only schools containing second, third, fourth,

and/or fifth grade classrooms contained within Missoula County were asked to participate in the study.

This research confined itself to questioning second through fifth grade teachers and elementary principals about their implementation of IEFA through the administration of survey questionnaires. A sample of 10 school leaders, 22 fifth grade teachers, 64 second through fifth grade teachers and was obtained. The second portion of the study was the testing of fifth grade students on their understanding of IEFA content through the administration of an assessment aligned with the Montana standards for social studies and seven Essential Understandings. Scores were obtained from 512 students, meeting the requirements of the central limit theorem and obtaining a confidence interval of 99% and a margin of error of just 3.96%.

Limitations

All second through fifth grade elementary school teachers, fifth grade students, and school principals from Missoula County school districts were asked to participate in this study. Because that participation was voluntary, allowing teachers to self-select if they chose to participate, findings might have been affected if, for example, teachers with low implementation declined. The sample size obtained for each group—teachers, principals, and students—was a further limitation of the study. Due to the small number of principal participants, findings are not generalizable to any other school principals. Because the sample size was sufficient, findings for teachers and students are generalizable within Missoula County. While the results of the study may not be generalizable to school districts outside of Missoula County, individuals may discover that the findings are transferable to their particular setting. The fact that the teacher and

principal surveys and student assessment tool were researcher created was another limitation to this study.

The findings of this study are specific to the State of Montana. Should another state implement a similar mandate requiring all students to learn about the history, diversity, culture, and sovereignty of tribes residing in that state, officials must use their own judgment to determine if this study provides insight into the effective implementation of said mandate.

Significance of the Study

This study added to the body of knowledge about implementation of MCA 20-1-501, or Indian Education for All. Because the Indian Education for All Act has only recently been funded by the Montana State Legislature, little research has been conducted to date concerning how successful implementation efforts have been thus far. Until the 2006-2007 school year, few resources existed to help teachers teach Native content or build their own knowledge base. Knowledge of which teacher, leader, and curriculum variables are most predictive of student IEFA learning will allow for the development of a model which accounts for why students do or do not learn the desired content.

This study will assist OPI in understanding what students *have* learned about Indian culture and issues and examine variables which may predict their knowledge acquisition. It will also allow for an analysis as to whether actual implementation practices sufficiently reflect the intent of the mandate. Determining the emphasis teachers and principals place on IEFA implementation and the level of integration they achieve using available curriculum resources will hopefully clarify the existing challenges currently impeding educators. Additionally, data on fifth grade student achievement will

inform the Office of Public Instruction as to how successful IEFA implementation has been thus far. OPI may use this data to determine strategies that might most successfully impact Indian Education for All implementation. OPI may choose to replicate the study in the future to determine if teachers and leaders have made progress with implementation, e.g., if student achievement has increased accordingly. Finally, with several other states recently implementing educational requirements similar to IEFA, the findings of this study may serve to inform educators across the country.

Summary of Chapter One

Though House Bill 528 was passed in 1999, Indian Education for All was first funded during the 2005 legislative session. Consequently there has been a dearth of research on student achievement in the area of IEFA and into the variables that predict student achievement. Through an assessment of student knowledge acquisition related to the Essential Understandings of Montana Indians, new knowledge has been acquired about how effective the implementation of IEFA has been to date and if teacher, leader, and curriculum variables predict student achievement in this area.

CHAPTER TWO: REVIEW OF THE LITERATURE

Introduction

This literature review consists of a comprehensive examination of Indian Education for All. Its purpose is to ground this study in the historical context of the topic, clarify the boundaries of this study, and justify the purposeful inclusion or exclusion of content (Boote & Beile, 2005). The methodologies utilized in the study are identified and critiqued and the significance of the study elucidated. This study will advance the reader's understanding of the history of IEFA, including implementation efforts and challenges, and add to the body of knowledge in this area by synthesizing the literature and providing a new perspective (Boote & Beile, 2005).

History and Meaning of Indian Education for All

During the 1972 Montana constitutional convention, the 100 delegates representing the people of Montana voted into law Article X, Section 1(2) which states that "the state recognizes the distinct and unique cultural heritage of the American Indians and is committed in its educational goals to the preservation of their cultural integrity" (Constitution of the State of Montana, 1972). While this is the only place the constitution refers to the Native people of Montana, inclusion of this language proved progressive—no other state has a constitutional commitment to preserve the culture of its indigenous people.

In support of this constitutional provision, the Indian Studies Law was adopted during the 1973 legislative session. This piece of legislation required that all public school teachers on or near Indian reservations be instructed in Native American Studies (Juneau & Broaddus, 2006). The law was never implemented, however, because of delay

between its adoption and efforts to put it into effect, a delay mainly caused by lack of funding and support by administrators and teacher's unions (Juneau & Broaddus, 2006). In 1975 the legislature made the law optional. That year also saw the conceptualization of the Indian Culture Master Plan, created to teach school personnel about Native Americans through conferences and workshops (Juneau & Broaddus, 2006).

A 1984 school-funding lawsuit recognized that the Montana constitution made schools responsible for educating Indian children and that the school funding system must address this responsibility; even so, no additional funding was forthcoming (Juneau & Broaddus, 2006). In 1990, Indian educators developed a state plan that included steps to be taken by all those involved in the education of Indian children (Juneau & Broaddus, 2006). Little came of this effort. A 1997 bill, sponsored by State Representative George Heavy Runner (Blackfeet) and passed by the legislature, designated the fourth Friday of September American Indian Heritage Day.

Two years later, State Representative Carol Juneau (Mandan/Hidatsa) pushed through the Indian Education for All bill (Juneau & Broaddus, 2006). House Bill 528 MCA 20-1-501, "Recognition of American Indian Cultural Heritage," requires that all students, Indian and non-Indian, be taught about the culture, history, and contemporary life of American Indians. According to the mandate, this instruction should include an emphasis on Montana Indian tribes and governments, and be conducted in cooperation with Montana tribes. In addition, all school personnel should develop understanding about Montana's tribes in order to promote better relations with Indian students and their families.

This piece of legislation rekindled efforts to integrate Indian content into the curriculum. The year 1999 also saw the development of the Essential Understandings of Montana Indians (EUs). The EUs revolve around the themes of diversity, culture, history, and sovereignty, and were identified by the Montana Office of Public Instruction (OPI) in collaboration with tribal representatives to specify the foundational knowledge about American Indians all students should acquire by the end of grade 12. The Indian Education Division within the Montana Office of Public Instruction bases all lesson plans and materials on this document (Juneau & Broaddus, 2006). In 2000, Montana Standards for Social Studies were reworked to include Indian content. State accreditation standards required schools to develop curriculum that included historical and contemporary content and literature about Native peoples (Juneau & Broaddus, 2006).

A second school-funding lawsuit was brought before the Montana Supreme Court in 2003. The Montana Quality Education Coalition (MQEC) sued the state on the grounds that the educational funding system was unconstitutional. Section X of the Montana constitution, which had never been funded, was used by MQEC to demonstrate that the state was failing to comply with the requirements of Indian Education for All. This lawsuit was won in 2004, and during the 2005 legislative session lawmakers were required to define “quality” education. Through the leadership of State Representative Norma Bixby (Northern Cheyenne/Zuni), language included in this definition required the integration of Montana Indian cultural content into the curriculum. This legislative session for the first time allocated funding for Indian Education for All. Over $13 million has since been allocated to the OPI to help with implementation efforts, and one million allocated to the tribal colleges to write their tribal histories (Schweitzer, 2006).

The IEFA mandate requires that tribal history and culture be taught in a culturally responsive manner (Starnes, 2006). According to Starnes (2006), "IEFA is not a program, curriculum or instructional add on. It might best be understood as adding layers to what teachers are currently doing" (p. 187). Teachers would continually work to integrate Indian content and perspectives into existing curriculum (Starnes, 2006).

Rationale for Indian Education for All

IEFA is a constitutional requirement, addressed additionally in statutory law and Montana Supreme Court decrees. For this reason alone, it must be taught in all Montana schools. In Montana, American Indians constitute the *majority minority*. In a state where Native peoples are the majority minority, IEFA is morally and ethically the right thing to do (Starnes, 2006). While the 2000 census reported that 6.2% of the Montana population is American Indian, a recent study determined it to be 8% and a third source, 11.4% (Melmer, 2006; OPI, 2008; Zehr, 2008). The 2006 data records 16,502 Native students in grades K-12. Indeed, 38 districts reported 50-100% Native student population; 14 reported 30-50% Native student population; and 37 reported 10-30% (OPI, 2008). According to the same source, 57.8% of Native students were enrolled in a school district with greater than 50% Native students.

Montana's seven reservations are home to 11 distinct tribal nations. A 12th tribe, the Little Shell Band of the Chippewa, has no land base. In all, these seven reservations make up 9% of Montana's land base (McCulloch, 2006). In addition, members of all 12 Montana tribes live outside the reservation boundaries in Montana's cities, towns, and rural communities. Many Native children find themselves in the larger cities when their parents attend college in Missoula, Bozeman, Billings, Dillon, or Havre. For example,

19.1% attended an urban school in Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, or Missoula, while 23.1% were enrolled in non-urban districts with fewer than 50% American Indian students (OPI, 2006).

With the growth of our global economy, a need exists to integrate multicultural perspectives into the curriculum. IEFA encourages all students to expand their worldview and become less Eurocentric, deepening their knowledge of other cultures and developing the necessary skills for success in an environment ever more global and diverse. Teaching multicultural content helps students to understand politics, to understand themselves more deeply, and to enhance their sociocultural growth (Starnes, 2006). It would follow from Starnes that in a state like Montana, with a primarily Euro-American population and a strong presence of Native peoples, a multicultural perspective would be promoted primarily through gaining an understanding and appreciation of Native peoples. This quest, of course, becomes challenging when teachers themselves know little about American Indian history and culture, because of deficiencies in their own education, including their teacher preparation programs. Indeed, as one prominent anthropologist has pointed out, most of what teachers know about Native American history and culture comes from the media or the national mythology or archetypes that have developed since America was first settled by Europeans, all of which continue to permeate American history textbooks (Loewen, 1995).

Stereotypes and Omissions

Stereotypes. For much of our history, American Indians have been depicted as savages, albeit sometime as *noble* savages (Loewen, 1995). Indigenous people in the Americas have been lumped together as one people rather than recognized as distinct

cultures. Stereotypical portrayals of American Indian culture typically include elements of Plains Indian cultures such as teepees, horses, and feather headdresses, along with totem poles appropriated from Pacific Northwest tribes (Dodge, 1977; Loewen, 1995). Native Americans have been portrayed as unable or unwilling to adapt to the changes brought on by European settlers—an utter inaccuracy. In many instances, tribes did adapt. The Plains Indian culture, for one, is a prime example of adaptation to change with the arrival of the horse, guns, and the continuous push of tribes from East to West by white settlers. In other instances, American Indians were *not permitted* to acculturate, as exemplified by the Cherokee, who first adapted to European culture by establishing plantations worked by African slaves, but eventually were forced out of Georgia on the Trail of Tears (Loewen as cited in Jetty, 2006). Native history is an integral part of American history, and yet, still today, Indians are seen as "the Other," overlooked and feared (Starnes, 2006).

Since the coming of European Americans to the region now known as Montana, those indigenous to this region have been forced to relinquish their land and compelled to educate their children first through compulsory boarding school attendance, and more recently through the public school system. This process and the accompanying Federal policies compelled Indian people to choose between extinction or forced dependency on the federal government and forced assimilation (Charleston, 1994), resulting in the loss of Native languages, history and cultural identity over the last 200+ years (Loewen as cited in Jetty, 2006; Starnes, 2006). The inaccurate and offensive manner in which American Indians have been depicted in textbooks and in curriculum taught in the classroom greatly harmed Indian children and their scholastic achievement and motivation. According to

Loewen, “It affected their self-confidence; it affected their ability to function in our world. It also has had a terrible impact on non-Indian people: it makes us ethnocentric and stupid about other cultures” (Loewen as cited in Jetty, 2006, p. 222). And yet, it is quite evident—both intuitionally and empirically—that education is the principal way the history, culture, and language of Native peoples can be preserved and passed on to the next generation (Starnes, 2006).

Omissions. Though society has in recent years become increasingly tolerant and accepting of diversity, Native Americans are still marginalized through the absence of curriculum which reflects their culture and values (Tall Bull, 2006), through curriculum which omits information about contemporary cultures, and thorough curriculum which is superficial at best and inaccurate at worst (Dodge, 1977). Indian children are unable to relate to the history taught in the public school system (Tall Bull, 2006). According to C. Juneau (2006), “It is only by educating our young people that we can reclaim our history and only through culturally responsive education that we will preserve our cultural integrity” (p. 217).

In view of the foregoing facts, the implementation of IEFA requires that all K-12 students will learn about Montana Indians in a culturally responsible and authentic manner, serving to improve race relations and inspiring everyone to learn from diversity (Falcon, 2003). There exist large gaps in students’ knowledge about Montana’s Native peoples. Most cannot locate 7 reservations, don’t know that over 12 Native languages are spoken in the state, and know little or nothing about Native American leaders, contemporary or historic (Starnes, 2006). Tribal sovereignty is especially misunderstood. Prior to European-American settlement, Indian nations executed their sovereign rights to

negotiate boundaries, engage in trade, and interact with allies and enemies through war and alliances. Today, most individuals don't know that tribes are sovereign nations and that eight sovereign nations exist in Montana (Starnes, 2006).

Non-Indian children's increased understanding of Indian history and present-day issues will likely improve the future of Indian children (Juneau, 2006). Indian children, when seeing themselves reflected in the curriculum, will feel a sense of belonging (Juneau, 2006). In the words of a one scholar of multiculturalism:

> The traditional master narrative we've learned in our schools says that this country was founded by Americans of European ancestry and that our ideas are rooted in Western civilization. But when we just look around at ourselves, we realize that not all of us came from Europe. Many of us came from Africa and Latin America, and others were already here in North America…It is not only more inclusive, but also more *accurate* to recognize this diversity. (Takaki as cited in Halford, 1999, ¶ 1)

In short, more accurate representation of American history, which includes diverse perspectives within the curriculum, will promote interest in academic studies, ultimately increasing Indian students' academic achievement and narrowing the achievement gap.

All Americans are affected by the Hollywood portrayal of Natives. Even teachers are misinformed or uninformed, having been taught little or nothing about Indian people during their teacher preparation programs. They are too frequently capable only of passing on that miseducation— those stereotypes and the Euro-American-perpetuated myths— to their students (Starnes, 2006). As a result, American children as well as adults

fail to comprehend that each tribal group is a distinct nation with a culture distinct from other Native cultures. There is no universal “Indian culture” (Starnes, 2006).

Development of Prejudice

Abound (1988) defines prejudice as “an organized predisposition to respond in an unfavourable manner toward people from an ethnic group because of their ethnic affiliation” (p. 4). Prejudice includes negative hateful attitudes based on ethnicity, not personal characteristics, differing thus from stereotypes which are “rigid, overgeneralized beliefs about the attributes of ethnic group members” (Abound, 1988, p. 5). Stereotypes are not necessarily accompanied by negative feelings or attitudes, and are evaluative rather than descriptive.

Abound (1988) showed that children’s prejudices are not directly attributable to parental attitudes, but rather to their individually formed perceptions. While adult prejudice rates have fallen, rates in children have not. Parents with positive attitudes about race and diversity do not necessarily raise unprejudiced children, though ethnocentric parents are more likely to have prejudiced children. Children under the age of seven do not assume their parents’ attitudes, and may in fact be more prejudiced than their parents. Children over the age of seven are more likely to reflect their parents’ attitudes (Abound, 1988).

Prejudice in children may vary based on their developmental level as well as individual characteristics. Attitudes about ethnicity first develop around age four. Later, children begin to note differences between individuals rather than ethnic differences. After age seven, white children show a decrease in prejudice and minority children show an increase in positive attitudes towards their own group. This corresponds to major

cognitive changes children undergo at this age. They become less self-centered and more group-centered and focused on individuals other than themselves. It is also at this age that parental attitudes begin influencing children's attitudes, as does the ethnic diversity of their school. Children adopt parents' attitudes when they have developed the cognitive capacity to understand them (Abound, 1988).

Awareness of ethnic and racial groups is a prerequisite to prejudice. Younger children describe ethnic differences based on such external features as dress, language, or skin color, while older children (10 and up) are aware of such internal factors as religious beliefs. External differences are not superficial to young children, for they form the basis of friendships and self-identity (Abound, 1988).

American Indian Student Achievement

During the 2006-2007 school year, 45 of the 83 schools that did not meet Annual Yearly Progress (AYP) had a 50-100% American Indian population. Of school districts with a 50-100% Native population, 27 of 62 did not meet AYP, while 66% of districts on reservations did not meet Annual Yearly Progress (OPI, 2008).

In guidelines developed for the OPI to assist Montana schools in their development of five-year comprehensive plans for the implementation of IEFA, Falcon (2003) recommends that in order to improve Indian student achievement, teachers should differentiate instruction, use instructional techniques which empower rather than assimilate, make essential skills automatic, and provide time for in-depth rather than superficial exploration of concepts that are meaningful to Indian students (p. 2). Additionally, Falcon suggests that the utilization of higher-level problem solving and writing skills early on in the educational process will lay the foundation for future

educational success. Materials used for instruction should reflect tribal knowledge, language, beliefs, and images, and schools that are largely native should provide for the active utilization of tribal resources and materials in a manner that is central (rather than peripheral) to the curriculum and standards. Students should have the ability to contribute to community and economic development, and to tribal language proficiency (Falcon, 2003).

According to Abound (1988), Native American children with higher self-esteem display greater pro-Indian attitudes, a finding which does not hold true for other ethnic minority groups (e.g., African American children with high self-esteem do *not* become more pro-African American). Native American children with high esteem feel a greater connection to their own group than to Whites. Making curriculum relevant through an integration of cultural content heightens Indian students' self-esteem. Montana educators have observed the positive results of IEFA implementation (Abound, 1988). Shirley Ingram (2006), a social studies teacher on Rocky Boy's reservation, noted that as she became aware of IEFA and integrated the Essential Understandings into her teaching, she transformed her classroom into a place that reflected the uniqueness and diversity of her students. Her students, their families, and tribal elders noticed and responded positively to these changes. Ingram (2006) stated:

> My Chippewa-Cree students do better when they see themselves in the content and materials I use. They do better when the classroom reflects them and their culture and communities. I believe that graduation rates and test scores will improve when we

> begin to give Indian kids more and more reasons to come to school everyday. (p. 221)

Ngai and Allen (2007) noted the positive effects of IEFA implementation on student self-esteem in an urban elementary school:

> Parents and school staff observed that Indian students at L&C School are standing taller since the onset of the IEFA project. In the past, Native students tended to keep their cultures inside. Now many of them have started to express pride in their heritages and confidence in themselves. They have become more comfortable participating in class and they appear to be happier at school. (p. 9)

American Indian students need a culturally relevant curriculum and positive educational environment that incorporates indigenous knowledge while essentially transforming the structure of the school (Grande, 2004). The potential consequence of ignoring necessary restructuring of curriculum is students' refusal to learn what schools teach through poor attendance, inattention, misbehavior, violence, refusal to complete schoolwork, or dropping out of school entirely: a type of resistance theorists consider "political" (Nieto, 2000).

Dropout rates

Only 66.2% of Native students who enrolled in grade 9 during the 2003-2004 school year graduated on time, compared to 88.6% of White students. The peak dropout rate for Native students is grade 9, as opposed to grade 11 for White students (OPI, 2008). The dropout rate for Native American students in grades 7 and 8 was 0.9% in 2004-2005, 12 times the comparable rate of White students. From 2000-2005, American Indian 7^{th} and 8^{th} graders represented 71.8% of the dropouts for these grade levels, with

more females than males dropping out. During this same period, the dropout rate for Native high school students was 8.4%, with more males than females dropping out. Native American students made up 10.7%of the school population in grades 7-12, but 26.7% of the 7th-12th grade dropouts. Native dropouts at these grade levels were more common in schools with greater Native populations, while high school students were more likely to drop out when attending an urban school (OPI, 2006). Methods for improving the high dropout rate might include strengthening identity, resiliency and parent/community partnerships, using instructional models which focus on student assets rather than deficits, individual needs, and experiential learning, low student-to-teacher and -counselor ratios, and school restructuring (Falcon, 2003, p. 3).

Indian Education for All implementation may have already positively impacted the dropout rate for Native students. Dropout rate for American Indian students decreased 3.2% between the 2000-2001 and the 2006-2007 school years, from 10.4% to 7.2%. The White student dropout rate declined just 0.2% during that time, from 3.5% to 3.3% (OPI, 2008). Note that 1999 was the year that MCA 20-1-501 was adopted and 2005 was the first year it was funded.

As for the effect of all this on the relative success of Native college students, currently, according to the American Council on Education (2002), Native American students attending an institute of higher education have higher dropout rates than any other minority group. Further, their retention rate, college admission rate, and academic achievement are lower than other minority groups.

Similar Measures Around the Nation

Though Montana has set the highest standard and is regarded as a model for other states vis-à-vis constitutionally mandating, and via statute funding, Indian Education for All at all grade levels and in a wide range of classes, several states have passed less-comprehensive legislation requiring lessons about Native tribes. While Native studies has been mandated for all students in a few other states, in some of them only students taking particular classes such as social studies or history, perhaps for but one or a few grade levels, are exposed to this curricula. And sometimes laws are vague or do not include the necessary funding to implement Indian education legislation.

Though several new laws have been passed since 2005, M. McCoy, staff attorney for the Native American Rights Fund, compiled the most recent and comprehensive information on state Indian Education laws. Originally written in 1997, it was updated in 2005, and presented at the 2005 Strengthening Partnerships Conference sponsored by the Council of Chief State School Officers (McCoy, 2005). Only about a dozen states had laws in 1997 that provided for Indian education curricula. By 2005, twenty-six states had laws addressing public school curricula and programs (McCoy, 2005), with only a few addressing Indian education for all. McCoy considers Montana and New Mexico leaders in strong state-level leadership and funding (Zehr, 2008).

New Mexico's legislature in 2003 found that "the state's bilingual multicultural education program goals are for all students" and the new Indian education division was to "develop curricula to provide instruction in tribal history and government and develop plans to implement these subjects into history and government courses in school districts throughout the state" (McCoy, 2005, p. 49). In 2006, the New Mexico Report to the

Legislative Committee, using Montana as a model, recommended that the New Mexico Indian Education Act of 2003 be expanded "to include all New Mexico students in receiving instruction in Native American culture throughout the curriculum" ("New Mexico," 2006, p. 15).

In 2007, South Dakota passed an Indian Education Act requiring instruction for all students from K-12 on the culture and history of the states' tribes (Zehr, 2008). Due to similarity between the two states in terms of their proportion of Indian students (over 11 percent each) (Zehr, 2008; "Foundation," 2008), the wording of its bill is much like Montana's IEFA (Pember, 2007). Though funding was not provided in the South Dakota legislation, in 2008 the Indian Land Tenure Foundation awarded $90,094 in grants and contracts for development and implementation of curriculum in both South Dakota and Montana ("Foundation," 2008).

According to Zehr (2008), other states requiring education for all students about Indian culture and history include Idaho, Minnesota, New Mexico, and Wisconsin. Maine, which requires the teaching of Native studies at every grade level, should be added to this list (Carolino, 2005). It stipulates that the following topics must be taught: Native tribal government and their political systems; Maine Native American cultural systems; Maine Native American territories; and Maine Native American economic systems (Carolino, 2005).

Wisconsin, which passed a law requiring the inclusion of information about its tribes in social studies standards and assessments, and which provides free technical assistance and curriculum materials, has not yet provided actual funding for the teaching of Native American history and culture (Zehr, 2008). In 1989, a legislative initiative in

Wisconsin required local school districts to develop a curriculum about Ojibwe treaty rights. In cooperation with the American Indian Language and Culture Education Board, the 1989-91 legislative session appropriated funds for an American Indian Studies program. Wisconsin Bill 31 included the following four provisions: (a) the state superintendent was required to develop a curriculum for grades four through twelve about Chippewa treaty rights; (b) school boards were required to provide an instructional program at all grade levels to develop an understanding of minorities, including American Indians; (c) beginning July 1, 1992, teacher training institutes were required to include the study of Indian history, culture, and tribal sovereignty as a requirement for licensing; (d) beginning September 1, 1991, each school district was to include instruction on Wisconsin tribal groups two times at the elementary level and once at the secondary level ("Indian Country," n.d.)

According to McCoy, Minnesota's law states "Enrollment in American Indian language culture education programs shall be voluntary," and "to the extent it is economically feasible, a school district or participating school may make provision for the voluntary enrollment of non-American Indian children in the instructional components of an American Indian language and culture education program in order that they may acquire an understanding of the cultural heritage of the American Indian children for whom that particular program is designed…priority shall be given to American Indian children" (McCoy, 2005, p. 42).

Other state legislation has bypassed a strict mandate requiring Indian education for all students in all grades and in a variety of courses, but encourages the incorporation of Native America in some school district curricula, usually social sciences, history,

government and cultural studies. Oregon, however, encourages every school district to infuse Native curriculum and instruction throughout the curriculum (Runfola & Carolino, 2004).

Recently the State of Washington, which had previously worked with tribes to develop a Native American Reading curriculum (Runfola & Carolino, 2004), went beyond simply urging school districts to include Indian studies in their courses. In 2007, House Bill 1495 was passed that requires, among other stipulations, a mandatory high school course including information about the history, culture and government of Washington tribes (Brownfield, 2007).

Oklahoma, a state with a 19% American Indian student population (Zehr, 2008), requires a core social studies curriculum for all students in the public schools that must "reflect the racial, ethnic, religious, and cultural diversity of the United States of America" (McCoy, 2006, p. 60). This includes Native Americans. Oklahoma state school laws passed in 2001 assert that students must learn about their own culture and those of others "with whom they share the earth" (McCoy, 2005, p. 59).

California's Education Code requires that instruction in social sciences shall include a study of the role and contributions of the various California ethnic groups, including American Indians, "with particular emphasis on portraying the role of these groups in contemporary society" (McCoy, 2005, p. 36).

Arizona's law stipulates that both elementary and high school students receive one year of "instruction in American institutions and ideals in the history of Arizona, including the history of native Americans in Arizona" (McCoy, 2005, p. 32). This instruction takes place within the context of the Arizona history curriculum. Similarly,

Colorado requires instruction in “the history, culture, and contributions of minorities, including…the American Indians” (McCoy, 2005, p. 37) to be taught within the U.S. history and government courses and Colorado history course, required for high school graduation.

Legislation is not always necessary to prompt Indian studies curriculum development for all students. Utah’s State Office of Education’s Indian Education division has been helped by several outside agencies to develop curricula on American Indians and their culture. The American Indian/Alaska Native Indian Education Advisory Committee has developed a plan to integrate American Indian history lesson plans into the classrooms of all students (“Utah,” 2007). In addition, the Utah Indian Curriculum Project of the American West Center is partnering with the Utah Division of Indian Affairs and KUED-TV to develop teaching guides and lesson plans on Utah’s Indian tribes for grades 4, 7, and 11 (“American West,” 2007).

Four states—California, Maine, Montana, and Wisconsin—mandate the teaching of tribal sovereignty in public schools. A fifth, Hawaii, served as a curriculum model for Indian tribal sovereignty with its promotion of studies on Hawaiian tribal sovereignty, culture, history, and language in its 1978 constitution (Carolino, 2005).

The importance of adequate teacher preparation cannot be underestimated. Montana, North Dakota, Minnesota, Wisconsin and Alaska are some of the states that mandate education for their teachers in Native American studies (“Indian Country,” n.d.; McCoy, 2005).

Multicultural Education Theory

Takaki states that "[t]he intellectual purpose of multiculturalism is a more accurate understanding of who we are as Americans" (as cited in Halford, 1999, ¶ 1). Multicultural education is transformative, challenging institutionalized mainstream knowledge and clearly communicating the fundamental values upon which it stands, including its commitment to actively improving society (Banks, 1996). That is to say, though implementing multicultural reforms is a challenging process for educators and school communities, it is of vast importance in the diverse and complex cultural environment of America today.

Early efforts to teach about the diverse ethnic, cultural, and religious groups residing in the United States began in the 1920s with the intergroup and intercultural education movements, distinct movements that developed independently but with overlapping purposes. Curricula, materials, projects, and programs were developed and implemented in schools and institutes of higher education that challenged the status quo. The purpose of these movements was to increase students' appreciation and understanding of ethnic and racial diversity, and to reduce prejudice and ethnic, racial and religious conflicts. (One strategy utilized was highlighting similarities between groups). These efforts died in the 1950s, a victim of McCarthyism. These early roots of multiculturalism focused primarily on what Banks (1997, 2002) refers to as a Contributions or Additive approach (discussed below) to multicultural education (Banks, C. A. M., 1996).

With the emergence of the Civil Rights movement and other social equality and ethnic revival movements, multicultural education as we know it today began its

evolution (Banks, 1995, 2006). In 1977, the Association for Supervision and Curriculum Development (ASCD) assembled a Multicultural Education Commission that summarized the rationale behind, and issues in, multicultural education and provided sample activities for its incorporation into the classroom. This document stated that the purpose of multicultural education was the development of respect for all people regardless of ethnic differences, the appreciation of diversity, and the elimination of discrimination. The means of accomplishing these goals included a restructuring of schools and school staffing to reflect the pluralistic nature of American society, unbiased curricula and testing materials, acceptance of multiple languages, pride in one's cultural heritage and that of others, and correcting myths and stereotypes by focusing on the contributions of minority groups (Gay, 1977; Grant; 1977). However, ASCD foresaw that multicultural education would continue to evolve and expand over time (Grant, 1977).

Multidimensionality of Multicultural Education

Today, the multidimensionality of multicultural education is apparent. Multicultural education includes, but goes far beyond, simply integrating diverse ethnic and cultural content (Banks, 1997, 2002). Multicultural education:

1. Integrates diverse ethnic and cultural content (Banks, 1997, 2002, 2006; Grant, 1977).
2. Is antiracist and seeks to reduce prejudice (Banks, 1997, 2002, 2006; Grant, 1977; Nieto, 2000).
3. Is important for all students, not just those belonging to an ethnic minority (Nieto, 2000).
4. Pervades school life (Banks, 1997, 2002, 2006; Nieto, 2000).

5. Is critical pedagogy (Nieto, 2000).
6. Is education for social justice (Nieto, 2000).
7. Examines how knowledge is constructed (Banks, 1997, 2002, 2006).

These intertwined components working together create a quality educational program that meets the needs of all students.

Diverse Ethnic and Cultural Content

Diverse ethnic and cultural content refers to the degree to which teachers include examples and information from diverse cultures in their teaching in order that students may better understand and appreciate the experiences and perspectives of diverse ethnic groups (Banks, 1997, 2002; Gay, 1977). The following list, compiled by Banks (2002) clarifies what students should study about different ethnic groups:

1. Origins and immigration
2. Shared culture, values, and symbols
3. Ethnic identity and sense of peoplehood
4. Perspectives, worldviews, and frames of reference
5. Ethnic institutions and self-determination
6. Demographic, social, political, and economic status
7. Prejudice, discrimination, and racism
8. Intraethnic diversity
9. Assimilation and acculturation
10. Revolution
11. Knowledge construction

Prejudice Reduction

Prejudice reduction is intended to decrease the painful, discriminatory, and racist encounters ethnic students experience as a result of their physical and cultural characteristics. Its intention is to prevent students from denying their ethnicity in order to assimilate into Western culture and avert the marginalization of students because of their differences. Multicultural education keeps students from feeling alienated and helps them become self-actualized participants in society. It affirms them and their place in the community (Banks, 2002).

One misconception about multicultural education is that it is *by nature* antiracist (Nieto, 2000). As Nieto elaborates, unfortunately, multicultural curricula frequently do not deal with the issue of racism, but instead are grounded in superficial celebratory activities that simply serve to perpetuate stereotypes. Teachers avoid controversy because it feels dangerous; in order to make the curriculum safe, it has been sanitized. Heroes have become lifeless, as in the case of Martin Luther King Jr., who "had a dream"—the only thing he ever did as most elementary school children learn it. History should be alive, exciting, and filled with action, controversy, revolution, and interesting, vibrant characters. A truly antiracist curriculum must address and respond to racist attitudes and actions, teaching students skills to combat racism. Bigotry does not simply disappear in the absence of any discussion of it. Students and teachers need to face the reality of American history, which includes discrimination, hatred, genocide, and exclusion of many groups of people.

Teacher training in prejudice reduction can alleviate discomfort with discussions of racism, help teachers understand how vital multicultural education is, and show them

how to develop a curriculum that truly embodies a multicultural philosophy. Elementary teachers may have an especially strong impact on reducing prejudice and helping students develop acceptance and understanding of ethnic diversity. Abound (1988) summarizes: research has shown that for children aged 7-12:

1. Judging people on the basis of internal rather than external attributes increases with age and is inversely related to prejudice.
2. Attending to between-group similarities and within-group differences increases with age and is inversely related to prejudice.
3. Recognizing that one's own perspective may differ from another's and that both these perspectives can be valid increases with age and facilitates an acceptance of ethnic differences. (p. 129)

Prejudice reduction helps all students develop positive attitudes toward diverse cultures and individuals from different ethnic backgrounds. To this end, teachers should regularly utilize curriculum materials that depict positive and realistic images of ethnic and racial groups, including positively reinforcing the color brown (Banks, 2002). The practice of cooperative learning allows diverse children to interact as equals without competition while pursuing common goals. Cooperative learning has been shown to affect students' racial attitudes, friendship choices, and reduce prejudice (Allport, 1954). Finally, teachers should involve children in vicarious experiences with diverse racial and ethnic groups through film, photographs, and books, and teach children to distinguish ethnic background from an individual's merely physical features (Banks, 2002).

Importance for All Students

Multicultural education is for everyone, not just members of marginalized ethnic groups. It helps all students become caring, civic minded, knowledgeable citizens of our democratic nation and of the world. Through knowledge, students develop greater respect for others. Multicultural education is not anti-Western, but rather seeks to educate students about the truths of Western culture and history (Banks, 2002). Rather than being divisive, its purpose is to unify (Banks, 2002).

Often, a multicultural curriculum is not considered academically challenging or is deemed less important than the "real" curriculum, not carrying the high status of the Euro-centered curriculum. Banks clarifies:

> The criterion used to identify content for inclusion into the curriculum should be the same for all topics, cultures, and groups; that is, whether the content will enable students to develop valid generalizations and concepts about their social world and the skills and abilities to influence public policy. To use one criterion to select content about European cultures and another to select ethnic minority content is discriminatory and intellectually indefensible. (Banks, 2006, p. 62)

When multicultural perspectives are omitted, members of both the dominant culture and minority groups are presented with a biased education. Students are taught an unreal view of the world where everyone is white, wealthy, Christian, heterosexual, and male (Nieto, 2000). Takaki views multicultural education as "a serious scholarship that includes all American peoples and challenges the traditional master narrative of American history" (Takaki as cited in Halford, 1999, ¶ 1). In such a Eurocentric, monocultural school setting, those who fall into traditionally problematical categories,

such as working class, gay or lesbian, female, or Native American are at risk academically, socially, and psychologically. Too often, they become invisible, unimportant, having apparently contributed nothing to American culture and history (Nieto, 2000).

When children are taught history from one perspective, they fail to understand that there are others, that history is not concrete or static, but interpreted. As a result, students fail to develop critical thinking skills, because there is nothing *to* think about; history just *is*. Multicultural education encourages individuals of differing cultural backgrounds to learn how to function in mainstream culture as well as within their own ethnic cultures. They develop a greater understanding of their own cultures as well as knowledge of ethnic and cultural diversity. When one is able to examine one's own culture from the perspective of other cultures, a depth of understanding of unique facets of one's own culture follows. Additionally, students learn to function in ethnic cultures not their own. It frees students from their cultural boundaries by exposing them to diverse worldviews (Banks, 2002), enabling them to develop ethnic literacy and a better understanding of American society (Banks, 2006). Consciousness-raising is a basic multicultural educational aim that is relevant for all students (Freire, 1990).

Pervasiveness in School Life

According to Nieto (2000), multicultural education must not exist in isolation from the rest of the curriculum or the school community. Multicultural education must be pervasive, encompassing the entire curriculum, the school setting, and relationships between teachers, students, and the community. "Multicultural education is a philosophy, a way of looking at the world, not simply a program or a class or a teacher" (Nieto, 2000,

p. 313). Major school reforms necessarily create vast changes in instructional methodology, content, and staffing so that students' diverse learning styles and needs are met. This process includes developing an empowering school culture and an equity pedagogy by working with students, families, and the community to develop curricula that are motivating and appropriate—which acknowledge, incorporate, and affirm such cultural differences as language and worldviews, and modifies existing teaching practices to meet the needs of all students (Banks, 2006; Nieto, 2000). Curriculum, pedagogy, and outreach must all be addressed and reformed (Nieto, 2000).

An empowering school culture and social structure requires a restructuring of schools to empower *all* students and educate *all* students equally so *all* can experience the greatest possible success (Banks, 2002). Characteristics of multicultural schools include the following (Banks, 2002, p. 19):

1. High expectations for and positive attitude toward all students
2. Curricula reflects the ethnically diverse experiences, cultures, and perspectives
3. Instructional strategies match the needs of all students
4. Respect for students' first language and dialects
5. Teaching materials that examine history and concepts from multiple cultural perspectives
6. Assessments that are culturally sensitive
7. School culture and hidden curriculum reflect cultural and ethnic diversity
8. School counselors who have high expectations for all students and help all to achieve career goals

Critical Pedagogy

Multicultural education is critical pedagogy (Nieto, 2000). It requires teachers to contemplate the purpose of education: Are students passive receptors of knowledge or active participants constructing a view of reality based on their own experiences? What is typically taught in school is what offends the fewest, reflects the view of the most powerful, and is the least controversial. The curriculum is monocultural, presenting a reality that is flat, static, and finished. Its hidden intent is to make tensions, controversies, problems, and passions disappear. In order to participate effectively in a democratic society, inarguably a purpose of American education (Dewey, 1966), students must be aware, informed, and critical thinkers (Nieto, 2000).

Historically, students have had limited influence in schools, with little choice about what they learn and no power over their learning experiences. This impotence has served to alienate students from school (Lipkind, 1975). Critical pedagogy is based on the experiences and viewpoints of students, requiring a student-centered and constructivist or experiential teaching methodology. Hands-on, exploratory, resource-based educational experiences that relate to their own lives are what students remember years later (Nieto, 2000).

Multiculturalism can help unite America. If implemented thoughtfully, creatively, and effectively, our educational system will be better able to prepare students for 21st century life (Banks, 1995). All students must understand and balance their individual and unique cultural, national, and global identities. They must function both within their own cultural groups and within the larger community as active participants. Thus students must develop self-understanding, commitment to American political ideals, and a global

consciousness. They must recognize their effect on world issues and how worldwide events impact their lives, including the interdependence between nations and their place in the global economy (Banks, 1997, 2006).

While we live in a nation manifesting evermore-cultural diversity, as Americans we share a collective history composed of cultural traditions, values, and political ideals that cement us as a nation (Banks, 1997). The United States motto, *e pluribus unum,* translates: "out of many, one." Throughout U.S. history, the majority European-American or White culture has dominated many of its citizens. Today, Americans are finding that "an *authentic unum* reflect[s] the experiences, hopes, and dreams of all the nation's citizens" (Banks, 1997, p. xii). This unity is only possible when all members of society, regardless of racial, ethnic, cultural, class, gender, and religious affiliation participate in the direction in which our democracy is moving—its aims, goals, and values (Banks, 1997, p. 5). Acceptance and appreciation of America's cultural pluralism requires human liberation and equal participation in the democratic process (MacDonald, 1977). Schools must respect and understand the differences among students in order to provide all students with the tools for success in the collective society. "We can create an inclusive, democratic, and civic nation community only when we change the center to make it more inclusive and reflective of our nation's diversity" (Banks, 2006, p. 195). As Takaki (1999) so eloquently states: "Multiculturalism is an affirming of what this country stands for: opportunity, equality, and the realization of our dream" (Takaki as cited in Halford, 1999, p. 13).

Education for Social Justice

Education for social justice seeks to right the inequalities within a society. Historically, one of the purposes of American education has been to instill in students democratic ideals and shape young people into active citizens (Dewey. 1966). However, few schools truly actualize this goal, instead working against it with such practices as standardized testing, ability grouping, a monocultural curriculum, and uninspiring teaching practices. The understanding that school is not at all related to real life demoralizes students. Too frequently, repetition of the same watered-down curriculum is taught year after year. Students don't actually practice civic ideals, or discuss power and inequality, because it would challenge the status quo. In such a setting, the concept of democracy becomes empty and meaningless, something that exists only in textbooks, not in the real world (Nieto, 2000). It becomes degraded, mutating to mean blind nationalism, or "uncritical patriotism and mandatory pledges to the flag" (Nieto, 2002, p. 41).

Knowledge Construction

Sociologists and philosophers have long held that knowledge is socially constructed, ever changing, and composed of ideas, values, and interpretations that help an individual explain or understand his or her reality. It is influenced by a person's social or economic position and the political system and social structure of the society in which he or she lives (Banks, 1996, 2002). The knowledge construction process is "the extent to which teachers help students to understand, investigate, and determine how the implicit cultural assumptions, frames of references, perspectives, and biases within a discipline influence the ways in which knowledge is constructed within it" (Banks, 2002, p. 14).

However, teachers' personal and cultural knowledge influences their teaching practices, including interpretation of the curriculum content and instructional strategies (Tetreault, 1993). Banks (1996, 1997) cites five types of knowledge: personal and cultural (home and community), popular (mass media), mainstream academic (Western), transformative academic (challenges mainstream), and school (textbook and teacher lecture content). Most of what students are taught falls into the mainstream academic category. In order, effectively, to challenge mainstream academic knowledge, teachers need to reform the curriculum by incorporating transformative academic knowledge perspectives (Banks, 1997).

Dewey, Freire, Banks, and Greene all assert that knowledge is not inherently neutral, but rather perpetuates either the status quo or promotes changes to the status quo (Singer & Pezone, 2003). In order for the American experience to be fully understood, it must be examined from multiple perspectives. This process helps students understand that knowledge is not universal, enabling them to learn from one another and creating an authentic and inclusive unity within American society (Tetreault, 1993). Knowledge reflects the experiences of the knower, his or her frame of reference or positionality, making it both subjective and observed through individual lenses. Even scientific knowledge is not objective, but laden with values, frames of reference, normative assumptions, and the knower's positionality, stemming from gender, race, class, and age (Tetreault, 1993). Thus, researchers and scholars, even teachers, must examine and reveal the worldview through which their work—research, scholarship, teaching—is generated (Tetreault, 1993).

Banks (1997, 2002) argues that education should help improve our society. Fullan concurs, stating that "those engaged in educational reform are those engaged in societal development; those engaged in societal development are those engaged in the evolution of virtue" (Fullan, 1999, p. 84). According to Greene (1993), the goal of learning is student discovery through questioning oneself and the world in which one lives. And in Tetreault's (1993) words:

> Students should be given opportunities to investigate and determine how cultural assumptions, frames of references, perspectives, and the biases within a discipline influence the ways that knowledge is constructed. Students also should be given opportunities to create knowledge themselves and identify ways in which the knowledge they construct is influenced and limited by their personal assumptions, positions, and experiences. (Tetreault, 1993, p. 21)

Indian Education for All challenges both teachers and students to learn from their experiences, exploring this new content, building a new knowledge base and expanding their perceptions of Indian people, culture, and history. IEFA encourages students and teachers alike to explore how this new knowledge fits into their conceptual schemata, insisting on the high value of the perspectives and ideas of individuals from diverse backgrounds.

Beyond Multicultural Education to a Critical Pedagogy

In order to improve education, it is first necessary to recognize that the problems facing our schools are a direct result of the structure of our society (Singer & Pezone, 2003). These authors point out that American society is competitive and feels little

obligation to provide tax-supported social services for the good of all. Our school system mirrors this defect by failing to provide an equal education for all—both in terms of curriculum, and because of constant funding shortfalls. Additionally, students are taught that competition and social inequality are acceptable norms. Practices of collaboration and cooperation (typically American Indian cultural values) are destroyed through a system of punishment and rewards (Kohn, 1999). This status quo is not conducive to advancing the aims of an educational reform effort such as Indian Education for All, which has the stated purpose of expanding cultural understanding between Indians and non-Indians—in effect promoting social change—in many ways, toward a greater egalitarianism. Thus, educators must necessarily become agents of social change as they tackle the complex issues arising out of IEFA implementation. This fact means that educators must be lifelong learners who constantly strive to improve their own practice, for "teachers who do not take their own education seriously, who do not study, who make little effort to keep abreast of events have no moral authority to coordinate the activities of the classroom" (Freire, 1998, p. 85).

Critical pedagogy goes beyond multicultural education, and is based on the work of Dewey (1996, 2004) ,Friere (1990, 1998, 2005), and Grande (2004), among others. Students become critical thinkers, making critical judgments and connecting politics to social responsibility. They construct their own meaning from the world through critical examination of their experiences and that of others (Giroux, 2001). Through critical pedagogy, students find their voices, becoming empowered as they participate in the process of democracy, striving for equality, non-discrimination, and diversity. As Freire states, "One of the most important tasks of critical educational practice is to make

possible the conditions in which the learners, in their interaction with one another and with their teachers, engage in the experience of assuming themselves as social, historical, thinking, communicating, transformative, creative persons; dreamers of possible utopias" (Freire, 1998, p. 45).

Society is not stagnant, especially in today's world where change continues to occur at an unprecedented rate in the areas of communications, economics, technology, and knowledge building/acquisition. In order for schools to educate students for the 21st century and beyond, they must keep current with societal change. The result of such rapid societal change is that Americans' awareness of issues of justice and human rights has expanded through increased exposure to world cultures and politics. There has never been a better time for incorporating multicultural education into the school system and necessarily transforming that system at a fundamental level. Students must acquire knowledge of the world in a way that "places ideas and events in their social, historical, and cultural contexts" (Greene as cited in Singer & Pezone, 2003, p. 3).

American Indian education has been ignored and neglected by the majority, including scholars and critical theorists. At the same time, American Indian educators have resisted engaging in dialogue with scholars, instead focusing on tribally specific research, curriculum development, and resource development (Grande, 2004). As individual diversity grows among American Indian people, the experience of Native Americans becomes more varied, requiring too the expansion of indigenous intellectualism. Grande (2004) argues that critical theorists must examine the Eurocentric framework within which such theories are grounded, the deep roots that merge critical theory with Western thought: "the belief in progress as change, in the universe as

impersonal, in reason as the preferred mode of inquiry, and in human beings as separate from and superior to the rest of nature" (p. 3). At the same time, American Indian scholars must examine the practice of limiting access to indigenous knowledge and discourse about personal experience in the face of the increasing complexity of what it means to be Indian. Complex systems cannot be changed without "a critical mass of different groups working together" (Fullan, 1999, p. 81).

Implementing Multicultural Reform

Reservation life is replete with ills associated with poverty and at times resembles that of the world's developing countries. Residents lack economic and educational opportunities, and experience high unemployment rates, lack of health care, violence, poverty, and a high dropout rate (Freire, 1990). While Freire's work with the peasantry of Brazil does not entirely resemble the situation of North American Indians in the United States today, some comparisons can be made that will serve to inform the process of transforming our educational system into one that is truly multicultural. American Indians, like the Brazilian peasantry, have been (and continue to be) oppressed throughout U.S. history by White oppressors.

Reform requires diverse groups of people working collaboratively and mediating resistance and conflict (Fullan, 1999). Multicultural reform requires that White Americans move beyond feelings of guilt about historical oppression, denial, hostility, and fear of diversity. They must recognize that they have in fact benefitted from racism, and that they continue to reap the benefits of white privilege. White Americans must recognize the need for working with people of different cultures, lifestyles, and perspectives in today's world. These aims can, in part, be accomplished by supporting

multicultural education and a more accurate and inclusive historical account that provides for diverse perspectives. They must become involved in multicultural education, take action, and become active participants contributing to and taking responsibility for the implementation of multicultural education in order to create a more equitable future (Howard, 1996). Cooperation, unity, and organization between members of ethnic groups who have been oppressed and members of the majority group who have acted as the oppressor is required in order to promote changes in society (Freire, 1990). Joining efforts, resources, energy and commitment is the healing path for all (Howard, 1996).

Multicultural educational reform must incorporate the theories of Freire, Dewey, Banks, and others while systematically implementing the desired multicultural (and IEFA) curriculum changes. According to Dewey, democratic participation includes learning about the views and perspectives of others as well as contributing positively to the community and greater society (Dewey, 1966; Hansen, 2006). Democratic dialogue helps build transformative learning communities in which students feel comfortable expressing their ideas and feelings, sharing their unique background and experiences, while examining issues from multiple angles (Greene, 1993a; Singer & Pezone, 2003). Such a humanistic curriculum is meaningful for students because it connects them, both emotionally and intellectually, with their fellow man (Dewey, 1966; Page, 2006)

Maxine Greene (1993a, 1993b, 1993c) argues that in a democratic classroom, the teacher listens to students' voices, increasing the teacher's understanding of his or her students' experiences and interests, and empowering students. Students question and make discoveries about themselves and the world through the introduction of multiple perspectives. These goals mirror those of Indian Education for All; through the

implementation of this mandate it is believed that students' worldviews will be fundamentally altered in a fashion that promotes equality and understanding among all Montanans.

With 90% of Indian children attending non-Indian schools (Gallagher, 2000), it is not enough to provide culturally relevant experiences to Indian students. However, in order for multicultural educational change to happen, both Native and nonnative societies must work together (Charleston, 1994). Indian education must in fact alter the structure of the institution of schooling itself, incorporating indigenous knowledge and practices into the school system (Charleston, 1994; Grande, 2004). American Indian scholars and critical theorists must work together to remove oppressive, outdated, colonialist structures from schools, replacing them with a humanistic and diverse educational system that fights racism and classism, reflecting the experiences of all students. "Critical theorists extend critiques of the social, economic, and political barriers to social justice as well as advocate for the transformation of schools along the imperatives of democracy" (Grande, 2004, p. 6).

A critical pedagogy for Indian education respects tradition, trusts ancestral knowledge and practices, questions the European-Western colonialist status quo, and empowers all students. Educators must recognize that American Indian cultures had their social systems that reflected tribal values—that democracy was forced upon them through such practices as forced U.S. citizenship and allotment for the purposes of assimilation, generally counter to the wishes of tribes. Forced democracy resulted in the destruction of Native economic and cultural systems by redefining such concepts as land use and ownership. Multiculturalism must be broader than simply equality within the

bounds of American democracy; rather, democracy itself must be examined for its effects on and diversion from tribal ways of life (Grande, 2004).

Implementing multicultural reform, of which Indian Education for All is one part, must necessarily involve a massive effort by the Montana State Office of Public Instruction, school boards, administrators, teachers, and the community. However, the value of such a reform effort cannot be stated strongly enough. Children come to school with negative attitudes and misconceptions about people different from themselves, which can be mitigated through lessons and integrated units that include content about diverse groups. In order to transform the current curriculum to one that is truly multicultural, children need to be introduced to a wide variety of people—women, children, different religious groups, different socioeconomic classes, different ethnicities within the US and the world. A truly democratic educational system motivates teachers, students, and communities to make choices that contribute to increased social justice, equality, and quality of life for all members of society (Grande, 2004).

Multicultural education promotes equity in education by broadening understanding of the needs of children from diverse backgrounds, which can in turn inform instructional practices and improve communication with families (See Banks 1995, 1997, 2002, 2006 for a full discussion). By learning about the experiences and perspectives of diverse groups, students develop empathy, critical thinking skills, and a more honest understanding about the world in which they live. They learn to work cooperatively and respectfully in groups of different sizes and compositions. As students become comfortable working in non-ability-based groups, they learn to express and

support their personal opinions, to share their individual skills and real-life experience with their peers, and to respect individual differences.

A multicultural curriculum would include the contributions of minorities and women without excluding traditionally important historical figures. This objective can be accomplished by centering the curriculum on interdisciplinary themes or on such issues as racism, culture, or power examined from multiple perspectives rather than historical periods (Gay, 1977; Banks, 1996). Through first-hand accounts, children can develop a deeper understanding of history than would be possible with text books, because they can better relate to the personal experiences of others. Understanding that we are all immigrants to this country, regardless of when we came, and that each group of immigrants faced a multitude of challenges including language barriers, prejudice, slavery, religious repression, and war should assist in eliminating stereotypes.

Implementation of Indian Education for All

Since 1972, many educators have worked persistently to realize the intent of the constitutional language regarding Indian education (McCulloch, 2006). However, the implementation of the Indian Education for All mandate began in earnest in 2005, when the legislature funded IEFA for the first time. The Indian Education division within the Montana Office of Public Instruction has since developed curriculum and resources for dissemination. It has also funded the development of curriculum through grants to teachers and schools, funded graduate research on Indian Education for All topics, and funded the tribal history projects whereby tribal colleges became responsible for writing the histories of the resident tribes. The Indian Education Division has also sponsored conferences to educate teachers in best practices in IEFA.

For future implementation efforts to achieve success, support from and collaboration between distinct factions within the state is necessary. These parties include the governor, school district superintendents, school principals, tribal education offices, and the Office of Public Instruction, which supervises and provides direction to all parties (Warren, 2006). Linda McCulloch, as Montana Superintendent of Public Instruction in a 2001 policy statement, declared her dedication to implementing Indian Education for All. In this statement she commits to working with the seven tribal education departments, the governor, Montana universities and tribal colleges, and local school districts in developing and promoting access to, and excellence in, American Indian education throughout Montana. She has stated that the Office of Public Instruction (OPI) will collaborate with tribal governments to improve Indian Education for all Montana students, honor government-to-government relationships between the State of Montana and the tribes, and work to decrease the achievement gap and dropout rate of American Indian students.

In 2003, Lori Falcon, working for OPI in collaboration with the Montana Advisory Council on Indian Education (MACIE), developed guidelines for each school to assist its construction of a five-year comprehensive plan for implementing IEFA. The purpose of these suggestions is to advise communities, school leaders, and educators on requirements to meet accreditation standards related to IEFA. The plan would include a school profile, in which schools state the district's policy on IEFA, as well as the mission, vision, philosophy and goals related to IEFA and improvement plans to address low achievement and graduation rates. Next, the plan would provide for the implementation of content, performance, and assessment requirements; schools would incorporate IEFA

benchmark standards into all disciplines through collaboration with the tribes and utilizing district funding. However, to date OPI has not provided a model for incorporating benchmark standards, except in social studies (T. Veltkamp, personal communication, December 26, 2008). Finally, each school would include in their plan the process it will use to align local curriculum and assessment and plan professional development. This would be done in collaboration with community members (Falcon, 2003).

In order to implement Indian Education for All effectively, appropriate and meaningful professional development opportunities must be a priority (Messinger, 2006; Warren, 2006). Being a multicultural teacher means becoming a multicultural person by learning more, confronting one's own racism and bias, and learning to see reality from multiple perspectives (Nieto, 2000, pp. 338-339). According to Swaney (2006), "Professional development that unlocks the mysteries of intercultural communication styles and emphasizes the impacts of culture on teaching and learning will be vital for all American educators…to better equip them to meet the needs of the culturally diverse students, and especially American Indian students, in their schools" (p. 191). Professional development must teach educators the information necessary to develop from within a commitment to change their teaching practices, as well as enable them to integrate Native content into the curriculum effectively (Warren, 2006). Falcon (2003) suggests that professional development be provided through job-embedded training of teachers in the areas of lesson development and assessment. Additionally, she suggests that schools and school districts should provide teachers with self-study time to internalize knowledge necessary to teach IEFA, and promote professional development

activities such as teacher participation in summer institutes and regional professional development activities.

Without a doubt, teachers also have a great need for appropriate materials for classroom use (Warren, 2006). Currently there is lack of curricula and that which exists is often inaccurate (Starnes, 2006). New materials should include pre-created lesson plans, books, and other curriculum materials that can be used by individuals with different teaching styles, age levels, and subject areas (Warren, 2006). The content used in the creation of these materials must be developed by the tribes, and this process has begun with the funding of the tribal histories project.

According to Swaney (2006), Director of American Indian/Minority Achievement in the Office of the Commissioner of Higher Education, one concern is that the integration of Native content might be accomplished in a manner that "trivializes highly complex cultural issues" (p. 190). Such trivialization could be the case if integration is only accomplished in the arts, such as through powwow or beadwork. These are visual representations of culture, not the culture itself, and as the sole representation of Native culture "does not begin to touch upon how our Native beliefs, attitudes and values, verbal and nonverbal language, and objects and artifacts affect out views of authority, relationships, action, and time" (Swaney, 2006, p. 190). What can teachers do to provide a more accurate and balanced instruction in American history? Loewen (as cited in Jetty, 2006, p. 219) provides a number of suggestions:

- Examine terminology.
- Get students to research terms used in textbooks. If they find biased statements, have them write the publisher to see about getting changes made.

- Get students involved in social action.
- Take students on field trips.
- Conduct role-plays with students about a historical event involving American Indians. This is an excellent activity for looking at history from multiple perspectives.
- Get students involved in doing research. Have them research family and local histories. Teach history in a way that gets them interested in learning about the past, rather than turned off by *memorizing* (emphasis in original) the past.
- Set aside a week or a day for students to present the history of their particular cultural group.
- An easy way for teachers to get up to speed about Thanksgiving is to read the Thanksgiving chapter in *Lies my Teacher Told Me.*

Examples of Successful Implementation Efforts

Successful implementation efforts have included curriculum development, staff development, and training institutes. Several school districts were awarded Ready-to-Go Grants, including Arlee Public Schools, Lewis and Clark Elementary in Missoula, and St. Ignatius Public Schools. Each grant provided for professional development and the creation of curricula that integrated IEFA into various content areas. Arlee Public Schools focused on integrating Native content into the reading curriculum. Lewis and Clark Elementary developed a K-5 integrated IEFA curriculum, a process guide for schools to support IEFA implementation, and an annotated bibliography of print and non-print fiction, non-fiction, and professional resources for teaching IEFA. St. Ignatius teachers developed a variety of middle school and high school lessons to teach Native

content in multiple subject areas. Several Ready-to-Go grant projects have since been, or will soon be, distributed to all schools in Montana.

Professional development opportunities are increasingly available throughout the state, including the Best Practices Conference sponsored by the Indian Education Division of OPI. This annual conference highlights the best IEFA grant-funded projects, curriculum development, literature, and research from around the state. The Montana Indian Education Association's annual conference continues its long-standing tradition of supporting Indian Education and the education of Indian children by highlighting IEFA implementation efforts. Finally, several professional development Indian Education for All training Institutes have been held in cities around the state, and University courses are beginning to be offered to provide much needed professional development of teachers.

Additionally, the Indian Education Division of OPI has funded the dissemination of print and non-print resources to public school libraries statewide. Each library has been provided with a core set of resources that includes DVDs, audio CDs, reference books, children's literature, and professional materials to support implementation. This includes some products of the Ready-to-Go grants, the tribal histories as written by the tribes themselves, and reprinted editions of titles from the Indian Reading Series, first published in the 1970s.

Challenges to Implementation

With the implementation of any mandate come unique challenges. IEFA is no exception. IEFA is uncomfortable for teachers because it is disorienting for the Western educator to become a learner along with his/her students. The education process is transformed into one in which both teacher and learner seek knowledge and grow as

learners together rather than the teacher being the possessor of knowledge which is imparted to the student (Freire, 2005).

Another challenge involves the diversion of IEFA funding by school districts to cover shortages in other areas. Money distributed to the schools for IEFA is folded into the general fund, and schools are not held accountable for their use (Starnes, 2006). A push by the legislature and OPI to provide accountability for how such funding is used is urgently needed.

A lack of grade-level appropriate curriculum materials constitutes still another challenge. Questions about what *will* be included, what *should* be included, and how to develop materials in an effective manner, along with the complexity of concepts and the diversity between tribes, make it difficult to create materials that can be used universally with ease (Starnes, 2005).

There exist different visions for IEFA implementation. Some believe IEFA should be driven by Indian educators and leaders alone. Others focus primarily on the benefits IEFA provides to Indian children (Starnes, 2006). Some recognize that success will come through collaboration, by overcoming the complex challenges that result from cultural differences and the sensitive nature of this work. Educators and Natives around the state must bridge this gap between means and ends and learn how to work together (Starnes, 2006).

Factors Impacting Student Achievement

School, student, teacher, leadership, and curriculum variables all influence the level at which students achieve (Marzano, 2003). This study examines specific teacher and leadership variables that are particularly pertinent to the successful implementation

of Indian Education for All as measured by student achievement. In addition, this study focuses on curriculum factors that impact student achievement in Montana Indian studies, a school-level factor (Marzano, 2003). Student variables, such as gender, socio-economic status, and family dynamics are outside the scope of this study.

School level factors result from school policy decisions and initiatives. Early work on variables associated with effective schools was conducted by Edmonds (1980), who found the following school-level factors correlated with effective schools: strong administrative leadership, an emphasis on basic skills, high expectations for student achievement, a safe and orderly environment, and frequent monitoring of student progress.

Levine and Lezotte (1990), building on this and other early research on effective schools, defined effective schools as those in which all students master the intended curriculum (p. 1). Their synthesis of a number of quantitative studies found similar factors associated with effective schools: productive climate and culture, focus on student acquisition of central learning skills, appropriate monitoring of student progress, practice-oriented site-based staff development, strong leadership, salient parent involvement, effective instructional arrangements and implementation, and high expectations and requirements.

Through meta-analysis of school effectiveness research in the United Kingdom, Sammons (1999) and Sammons, Hillman and Mortimore (1995) synthesized a larger number of quantitative studies than the earlier researchers, and found the following school-level factors associated with effective schools: professional leadership, shared vision and goals, a learning environment, concentration on teaching and learning, high

expectations, positive reinforcement, monitoring progress, pupil rights and expectations, home-to-school partnership, and a learning organization.

An exceptionally rigorous review of both qualitative and quantitative studies examining specific factors associated with student achievement— rather than school effectiveness as a whole—was undertaken by Scheerens and Bosker (1997). The school level and teacher level factors—after eliminating those determined not statistically significant by the researchers and those specific to resources and instructional strategies, which are beyond the scope of this study—synthesized in their research are listed below in order of largest correlation in terms of their impact on student achievement to smallest:

1. Time on task (.19)
2. Monitoring of student progress (.15)
3. Pressure to achieve academically (.14)
4. Parental involvement (.13)
5. Orderly school climate (.11)
6. Opportunity to learn (.09)
7. Time completing homework (.06)
8. School leadership (.05)
9. Cooperation (.03)

While these effect sizes appear small, especially when compared to the larger effect sizes of instructional strategies (.58 for reinforcement, .48 for feedback, .27 for cooperative learning, and .22 for differentiated instruction), the authors state that these factors should not be disregarded as they repeatedly appear in diverse settings and international studies on school effectiveness and thus should be, at the very least, considered good educational

practice or retained as hypotheses which require additional empirical support. Additionally, another possibility is that the phenomenon of diminishing rate of return could be at play, in which a non-linear relationship exists between the predictor variables and the outcome variable (student achievement): “After an initial steep increase the curve flattens, and above certain levels a large amount of extra input is required to attain an ever-smaller increment on the effect variable” (Scheerens & Bosker, 1997, p. 306).

Marzano (2003) synthesized the work of Edmonds, Levine and Lezotte, Sammons, Hillman and Mortimore, Scheerens and Bosker, along with his own work, grouping the earlier findings into five school-level factors that contain the basic findings of the other researchers. This synthesis was possible because while the language and wording of each study’s findings vary, their ideas and findings are very similar. The factors previously discussed were condensed into the following five school-level factors, ranked in order of their impact on student achievement:

1. Guaranteed and viable curriculum
2. Challenging goals and effective feedback
3. Parent and community involvement
4. Safe and orderly environment
5. Collegiality and professionalism

According to Marzano (2003), leadership is not a school-level factor, but rather an overarching variable that impacts the effective implementation of school level, teacher level, and student-level factors; as such, leadership will be discussed in a later section. Of the five school-level factors listed above, the first, a guaranteed and viable curriculum, is most relevant to this discussion, supporting the curriculum variables under examination

here. For the purpose of this study, the fifth school-level factor listed above, collegiality and professionalism, will be discussed in the section on leadership factors impacting student achievement.

Teacher Variables Impacting Indian Education for All Student Achievement

The individual classroom teacher has a strong effect on student achievement even if the school as a whole does not—and regardless of the variation in student's achievement levels in the classroom (Marzano, Pickering, & Polock, 2001). Four variables that influence student achievement are the teacher's commitment to the moral purpose of teaching, his or her classroom curriculum design, the teacher's participation in effective professional development, and familiarity with available instructional resources.

Commitment to the Moral Purpose of Teaching

Teaching is a moral profession (Fullan, 1993). According to Fullan (1999), "At the micro level, moral purpose in education means making a difference in the life-chances of all students—more of a difference for the disadvantaged because they have further to go" (p. 1). On a larger scale, moral purpose in education shapes the development of our society and our democracy. Teachers committed to the moral purpose of teaching envision a world with greater social cohesion and equality of economic opportunity (Fullan, 1999). Their effectiveness stems, in part, from "clarified and positive attitudes toward different racial, ethnic, cultural, and social-class groups" (Banks, 2006, p. 103).

According to Dewey, the teacher's job is not just to train children, but "the formation of the proper social life" (Dewey, 2004, p. 23). Teachers truly identifying with the profession are committed to the common good, and to achieving the tenets of

democracy through the educational system (Darling-Hammond, 1997; Fullan, 1999). Such teachers have "the knowledge and commitments they need to teach diverse learners well" (Darling-Hammond, 1997, p. 6). High performing, moral, and progressive teachers practice humility, decisiveness, courage, and tolerance (Freire, 2005). Humility requires courage (the conquering of fears), self-confidence, self-respect, and respect for others. It helps people understand that no one knows everything, everyone possesses both ignorance and knowledge, and thus teachers and students learn from one another and respect one another's differences (Freire, 2005).

Teachers must be change agents if they are to influence students' lives in a positive way. According to Fullan (1993), teachers who are change agents must possess the following skills: personal vision building, inquiry, mastery, and collaboration. When teachers focus on their own personal vision, they regularly examine why they became teachers and what difference they are trying to make. They become life-long learners, continually using inquiry to reexamine their internal purpose. Combining this individual purpose with collaboration results in change. Through their actions teachers achieve mastery, making change happen. Fullan states, "New mind-sets arise from mastery as much as the reverse." (Fullan, 1993, para. 14) Strong preservice teacher training and ongoing professional development help teacher achieve mastery.

While beginning teachers often feel that they are contributing to society in a meaningful way, over the years the difficulties of the profession cause teacher burnout. By consciously and reflectively accepting the moral purpose of education, and practicing the skills of change agentry, teachers focus on making a difference, meeting children's needs, and bringing about social change. Such action lends a sense of professionalism to

a career in which the idea of teachers-as-professionals is often challenged, and teachers stymied by a lack of advancement opportunities. By becoming change agents, teachers' commitment to teaching is reaffirmed and given new meaning and increased motivation.

Critical educators engage in the following pedagogical practices (reflective-reflexive skills). They:

1. Question whose beliefs, values, and interests are served by classroom content and practices, challenging the hidden curriculum that socializes students into the dominant culture.
2. Address social oppression as tied to race, gender and class.
3. Challenge the "banking" or transmission style of teaching as a learning ritual that maintains the status quo (see Freire, 1998; Moss, 2001).

Fullan (1993) argues that "beyond exposure to new ideas, we have to know where they fit, and we have to become skilled in them, not just like them" (para. 14), clearly true when applied to Indian Education for All. To be effective, the teacher must have the skills to "make effective instructional decisions, reduce prejudice and intergroup conflict, and formulate and devise a range of teaching strategies and activities that will facilitate the academic achievement of students from diverse racial, ethnic, cultural, and social-class groups" (Banks, 2006, p. 104). Teachers can't just learn about Indian people, and like the idea of IEFA. They must critically examine their ideology, their personal worldview and cultural assumption as well as determine where IEFA fits into the curriculum and master the skills to implement effectively such reform. This requires a deep understanding of his or her own cultural heritage and its relationship to and interactions with other ethnic and cultural groups (Banks, 2006).

Implementing change. Changes in attitudes, beliefs, and understanding tend to follow rather than precede changes in behavior (Huberman & Crandall, 1983). Change is successfully executed when ideas for change are supported by moral purpose and authority (Fullan, 1999). Individual change takes place over time and initially involves anxiety and discomfort on the part of the participants (Fullan, 1985; Huberman & Crandall, 1983). In their study of this issue, Huberman & Crandall (1983) noted that teachers were anxious and confused for the initial six months, describing the change process as overwhelming, difficult, and humiliating. Getting beyond this stage requires ongoing assistance, both technical and psychological (Fullan, 1985), and strong administrative support (Huberman & Crandall, 1983). Teachers initially uncomfortable with their attempts at implementing change, and those that receive no coaching, do not get beyond this stage of discomfort (Showers, 1983). That which is difficult incites fear—insecurity and lack of confidence. Teachers striving for change must not be paralyzed by their fear (Freire, 2005).

Effective change requires teachers to learn new skills through a cycle of practice and feedback (Fullan, 1985). Additional factors that support change include easing teachers into the change, holding frequent in-service meetings, and engaging a teacher-expert to assist others to implement the change (Huberman & Crandall, 1983). Ensuring that teachers understand the theory behind the practice, and putting pressure on teachers through peer and administrative interactions, also influence the change process (Fullan, 1985). School and district cultural norms impact the change process. The dynamics of the change process and interactions between members of the school community during the

change process must be understood before effective strategies may be developed to promote change (Fullan, 1985).

Indian people have five hundred years of history interacting with Western practices and institutions, including forced cultural assimilation, domination, and discrimination. In contrast, many White Americans have little experience interacting with individuals from minority cultures. Deloria and Wildcat (2001) argue that because Indian people are necessarily bicultural, Indian educators are in a stronger position than their White peers to critically examine the Western educational practices and provide leadership in meeting the specific educational needs of Native students while working towards instituting major changes in the system of public education. This includes putting Indian education in a tribal context, with a focus on building understanding and wisdom rather than memorizing facts. Both the context and the process must be reevaluated, especially in tribal schools serving a high percentage of Indian students. (Deloria & Wildcat, 2001).

Classroom Curriculum Design

The curriculum designed by the teacher is one of the three elements of effective pedagogy; the others are the instructional strategies and management techniques used by the teacher that are outside the scope of this study (Marzano, Pickering, & Polock, 2001). Marzano (2003) defines classroom curriculum as "the sequencing and pacing of content along with the experiences students have with that content…that are the purview of the classroom teacher" (p. 106). This differs from a guaranteed and viable curriculum, discussed later, which is determined at the state, district, or school level. Additionally, classroom curriculum design includes the manner in which teachers adapt required

content from state-level or school district standards, curriculum documents, and textbooks to meet the individual learner's needs (Marzano, Waters, & McNulty, 2005).

Effective curriculum design requires the teacher to identify specific types of knowledge that are the focus of a unit or lesson, set clear learning goals, communicate the goals to students, and design instruction geared to the goals (Marzano, 2003). The teacher must determine which skills must be mastered and which must be simply introduced, and present topical information or integrate topics, emphasizing the similarities (Marzano, Waters, & McNulty, 2005). Students must engage in learning activities that are structured to allow for effective transfer of knowledge—there must be logical progression of content and tasks. Multiple exposures to knowledge allow for assimilation to take place, and complex interactions with content are necessary for accommodation (Piaget, 1954, Marzano, 2003; Marzano, Waters, & McNulty, 2005).

The types of exposure students have to new knowledge should be varied each time, as they typically require four exposures over a two-day period to integrate knowledge into their schema. New content should be introduced multiple times using a variety of methods, including direct experiences such as simulation or real physical activity and indirect experiences such as demonstrations, films, readings, lectures (Marzano, 2003; Marzano, Waters, and McNulty, 2005). Dramatic instruction is more effective than visual or verbal instruction. Studies have shown that activating prior knowledge produces very little conceptual change, while discussion is more effective and argumentation the most effective of all for learning new content (Marzano, 2003; Marzano, Waters, & McNulty, 2005).

Yearlong IEFA integration. Authentic Indian Education for All classroom curriculum must be integrated into multiple content areas throughout the course of the school year. Banks (1997, 2006) espouses an approach to multicultural curriculum implementation in which the basic structure of education must be altered. Banks' transformational approach integrates multiculturalism into the curriculum "transforming" or altering the curriculum to include multiple perspectives. He sites four levels of multicultural curriculum reform. Level one is the contributions approach that is frequently seen in schools. It focuses on heroes, holidays, and discrete cultural elements. The problem with this approach is that it may leave the impression that ethnic issues and events are merely appendages to the nation's development. Level two is the additive approach, where content, concepts, themes, and perspectives are added to the curriculum without changing its focus. Level three is the transformation approach, where the structure of the curriculum is changed to enable students to view concepts, issues, events, and themes from the perspective of diverse ethnic and cultural groups. The final level is the social action approach, where students make decisions on important social issues and take actions (or prepare to take action) to help solve them.

Professional Development Participation

Factors that contribute to school-level change include the quality and quantity of the professional development teachers receive, combined with ongoing site-level and district-level support (Huberman & Crandall, 1983). Successful professional development supports sustained adult learning and is related to school improvement plans. Best practices in professional development require it be relevant and stimulating, allowing staff choice in content and format. Professional development must be applicable to the

teaching requirements of the school or district goals or state mandates and linked to the curriculum. One-shot trainings do not work—professional development should support long-term focused efforts (National Staff Development Council, 2001).

Effective professional development must adhere to the tenets of adult learning theory. Lieb (1991) lists four elements that help adults learn. First, the adult learner must have the motivation to learn, recognizing the importance of the information and not experiencing intimidation or feeling offended. Second, the adult learner requires both positive and negative reinforcement. Third, the adult learner will retain the information if he or she recognizes the meaning or purpose. Fourth, transference is necessary for the learner to apply and use the information in new settings. Glickman, Gordon, and Ross-Gordon (2007) state that adults learn *in experience* rather than *from* experience; thus, in order to learn and grow, teachers need to participate in a continuous cycle of collaborative activity and reflection on that activity, developing critical thinking skills.

In order to implement effectively multicultural educational change, teachers must develop expertise in the following three areas of knowledge (Banks, 1997):

1. Social science knowledge—which includes knowledge about the cultural and ethnic diversity that exists within society. It is acquired through an examination of underlying cultural assumptions, conflicting paradigms, and multiple viewpoints.
2. Pedagogical knowledge—which includes effective teaching strategies for teaching students from different cultural backgrounds.
3. Subject matter knowledge—which requires a depth of knowledge within content areas taught.

Familiarity with Available Indian Education for All Resources

Teachers who are familiar with available Indian Education for All resources know of the resources provided by OPI to each school library in the state, as well as those provided by their individual schools and districts. They use these resources to support their own professional learning and for instructional use in the classroom. They are able to utilize existing resources to support their instructional objectives (T. Veltkamp, personal communication, December 26, 2008).

Unpublished research conducted during the 2006-2007 school year found that teachers needed accurate and authentic materials and resources to support their IEFA implementation efforts. Nearly 63% of Missoula County Public School elementary school teachers (excluding those from Lewis and Clark Elementary, the experimental groups) reported a lack of IEFA resources in a survey conducted in May 2007 (Lipkind, 2007). However, since that time, a myriad of resources have been provided by OPI to Montana schools, and many more are available on the OPI website. Whether or not teachers today are familiar with those resources and make of use of them is unknown.

Leadership Variables Impacting Student Indian Education for All Achievement

Student achievement is higher with strong administrative leadership. Examples of strong administrative leadership include a highly visible and accessible principal who provides staff development resources, shares the decision-making responsibility with teachers, holds and communicates a clear vision of the school's educational purposes and standards—both within the school and with parents and other community members. Such a principal is involved in the instructional program, modeling effective teaching

practices to staff, earmarking resources for professional development for teachers in the area of curriculum and instruction, participating in professional development, working with staff to ensure that curriculum, instruction, and assessment are aligned, and monitoring the implementation of new practices. A strong administrator keeps the focus of the school on learning, emphasizing at staff meetings and in the classroom that learning is the most important purpose of being in school (Cotton, 2000).

A meta-analysis conducted by Marzano, Waters, and McNulty (2005) examined 21 responsibilities of school leaders and their correlation with student achievement. Of the 21, those responsibilities that most closely relate to Indian Education for All implementation are (a) leaders as a change agent (b) focus (establishing clear goals and keeping those goals in the forefront of the school's attention) (c) ideals/beliefs, and (d) resources (providing teachers with materials and professional development necessary for the successful execution of their jobs). The correlation between school leaders acting as change agents and student achievement was 0.25. The correlation between school leaders focusing on clear goals and student achievement was 0.24. The correlation between school leaders providing necessary resources, including materials and professional development, was 0.25. The correlation between school leaders communicating ideas and beliefs and basing leadership practices upon them was 0.22 (Marzano, Waters, & McNulty, 2005).

For purposes of this dissertation, the present researcher—having synthesized the conceptualizations of change theory scholarship in general, and education change, specifically—devised a somewhat different framework of concepts.

A. Leadership for change—a broad, higher-level concept, encompassing the processes and phases about which change scholars have *theorized.* Standing separately as more specific qualities—those subsumed as well under (A)—are:

1. Setting Goals
2. Communicating Priorities
3. Fostering Collegiality and Professionalism
4. Monitoring Implementation
5. Providing Effective Professional Development

Each of the six foregoing qualities are addressed in turn.

Translating leadership responsibilities into Indian Education for All leadership factors is necessary. The overarching IEFA leadership factor is *approach to change implementation according to change theory* when seeking to implement new curriculum or other school-wide changes. This factor includes developing an implementation plan that establishes and communicates priorities, setting specific goals, fostering an environment of collegiality and professionalism, monitoring implementation, and providing effective professional development opportunities (Fullan, 1985; Glickman, Gordon, & Ross Gordon, 2007; Huberman & Crandall, 1983; Joyce & Showers, 1980, 2002; Marzano, 2003; Marzano, Waters, & McNulty, 2005). The provision of resources will be addressed under the curriculum variables heading.

Leadership for Change

According to Stallings (1981), teachers change their behavior more when supervised by a supportive principal. Effective supervisory practices strengthen the role of the principal and promote successful school programs. An effective supervisor is an

instructional leader who possesses knowledge, interpersonal skills, and technical skills, and fosters teacher motivation. Such a principal pulls together the goals of the organization and teacher needs, responding to the principles of adult learning theory by providing direct assistance to teachers in terms of improved professional development, group development, and curriculum development (Glickman, Gordon, & Ross Gordon, 2007).

Implementing change "is a complex, dilemma-ridden, technical, sociopolitical process" (Fullan, 1985, p. 390). Marzano, Waters, and McNulty (2005) discuss two types of change: first-order and second-order change. First-order change is incremental; it consists of the logical next step in the direction the institution is already going. Second-order changes, on the other hand, are large, deep changes that take a new direction from the status quo and require new ways of thinking and doing. Such deep changes require nontraditional means to address the requirements of the change. While first-order change strategies are the common first response of organizational members when encountering a second-order change, they are insufficient; past experiences will not inform the new situation. Many innovations fail because they are implemented using first-order change strategies (Marzano, Waters, & McNulty, 2005).

According to Marzano (2003), there are five essential components for change: theory, demonstration, practice, feedback, and coaching. For change to be successful, it is necessary for teachers to learn the underlying theoretical basis of the intended change, to observe and practice the change, to receive feedback on their attempt to implement the change, to participate in ongoing coaching, including peer coaching, and to receive ongoing support (Joyce & Showers, 1980). Effective principals make formal

observations, are accessible to discuss ideas, seek teacher input for key decisions, portray confidence in teachers, and monitor the continuity of the curriculum (Marzano, 2003). Principals who act as change agents protect teachers who take risks, consciously challenge the status quo, and are willing to upset temporarily the school's equilibrium in order to achieve the desired result (Fullan, 2001; Marzano, Waters, & McNulty, 2005).

There are three broad phases in the change process: initiation, implementation, and institutionalization. Each stage requires ongoing planning, action, and reflection. For such vast local innovations as Indian Education for All, implementation demands all sorts of modifications in order to meet the needs of a specific school or district. And, lack of assistance by school leaders is a death sentence for innovations requiring major changes to teaching practices (Huberman & Crandall, 1983). There are, it would seem, salient differences between change implementation at rural schools, on the one hand, and urban schools on the other. Rural schools may initially have greater difficulty implementing change. They require more initial training because of the lack of district staff and access to information that is available to urban districts. They may also need to approach the community in a more intimate manner than in the case of urban schools (Huberman and Crandall, 1983). However, rural schools are often easier to work with once an innovation is initiated because their small size is more conducive to staff collaboration and interaction (Huberman & Crandall, 1983).

Strategies for change generally involve well-thought-out implementation plans. Fullan (1985) lists eight steps for implementing educational change, incorporating many of Huberman and Crandall's (1983) findings. The first five are relevant here:

1. Develop a plan. This may be accomplished by the superintendent alone or in collaboration with district staff.
2. Clarify and develop the role of central staff. The superintendent would realize this objective by training central office staff to support the development and implementation of the change. Reynolds (2001) stresses the need for a multilevel approach to change that includes defining the roles of teachers, parents, principals, support staff, higher education consultants, and local authorities.
3. Select innovations and schools. In the case of Indian Education for All, the innovation is required by constitutional and statutory mandate, and all schools must participate.
4. Clarify and develop the role of principals and the criteria for school-based processes. The role of the principal is strengthened by promoting peer interaction, investing in principals' professional development, providing follow-through assistance, and selecting principals based on their instructional leadership abilities.
5. Stress staff development and technical assistance. Leaders must invest in pre-implementation assistance, particularly materials, rather than early training. Users become more committed through their involvement over time, requiring later support and assistance rather than upfront. Using multiple formats for training—such as workshops, peer coaching, district administrative assistance, assistance from principals, meetings, and peer sharing—is most effective. Innovations should be implemented with fidelity, with the exception of local innovations that require modification during implementation. Central office administrators should

be involved in implementation, as should external trainers. Trainers should be specialized, assigned various roles based on their strengths—for example, working with teachers, or principals. Finally, local facilitators should be utilized. Both external and internal trainers need to understand their roles in the overall implementation process, and specifically, during each of its stages.

Finally, the change must become institutionalized. Without it becoming part of the normal, regular performance of teachers, the change will not become part of the fiber of the institution (Reynolds, 2001).

Setting Goals

In order to successfully implement change, school leaders must set and communicate clear, concrete goals (Marzano, Waters, & McNulty, 2005). When the school leader works with teachers to plan, design, research, evaluate, and prepare teaching materials, change is especially effective (Little, 1981). Marzano, Waters, and McNulty's meta-analysis identified the following four focus responsibilities, of which the first and fourth most clearly relate to IEFA implementation (Marzano, Waters, & McNulty, 2005, p. 50):

1. Establishing concrete goals for curriculum, instruction, and assessment practices within the school.
2. Establishing concrete goals for the general functioning of the school.
3. Establishing high, concrete goals, and expectations that all students will meet them.
4. Continually maintaining attention on established goals.

Clear, consistently enforced school policies developed collaboratively by teachers and the administrator, supports teacher change (Glickman, Gordon & Ross-Gordon, 2007).

Communicating Priorities

Schools are constantly pulled in multiple directions—required to implement new curricula, meet the requirements of a mandate, or improve student achievement in various content areas by implementing a new research-based program, to name a few of their major tasks. A school leader prioritizing IEFA implementation sets implementation goals with staff and regularly reminds staff of said goals at staff meetings. Principals must keep goals in the forefront as all-school priorities (Marzano et al., 2005). Effective change at the school level requires continuous talk about the innovation. Such collegial conversation creates a shared language among teachers. Through frequent peer and administrative observation and evaluation that shared language is cemented in practice. Colleagues teach each other the practice of teaching (Little, 1981).

Fostering Collegiality and Professionalism

Collegiality and professionalism refers to the manner in which teachers interact with one another and embody aspects of professionalism; it does not refer to teachers' personal friendships and social interactions, which research has shown to be counteractive to the goal of increased student achievement (Marzano, 2003). Collegiality and professionalism is specific to school climate and, as such, is separate from individual classroom climate (Marzano, 2003). A collegial and professional environment does not happen spontaneously, but rather is fostered through the work of a competent school leader.

According to Marzano (2003), the school leader must establish norms of conduct and behavior that engender collegiality and professionalism. While the practice of collegiality and professionalism is also a teacher variable, the development of a school climate in which collegiality and professionalism is the norm is under the purview of the school leader. In part, achieving such a school environment may be accomplished by the school leader by altering leadership practices in such a way that teachers are allowed greater involvement in policy-making and decision-making at the school level (Marzano, 2003). Leadership for change is most effective when carried out by a leadership team composed of a small group of educators with the principal functioning as a strong cohesive force (Marzano, 2003). The leadership team must operate in such as way as to provide strong guidance while demonstrating respect for those not on the team (Marzano, 2003, p. 176).

According to Marzano (2003), specific behaviors that enhance interpersonal relationships and thus help effect change are optimism, honesty, and consideration. Optimism helps others believe that difficult changes are possible. Honesty includes truthfulness, accuracy, and consistency between words and actions. Consideration requires a non-discriminating concern for all teachers and an interest in teacher's lives (Marzano, 2003).

Collegiality refers to professional relationships among teachers. Supportive, respectful, courteous relationships with peers—replete with enjoyable professional interactions—are associated with increased student achievement. A collegial environment also includes a climate where teachers share failures and mistakes as well as successes, and respectfully and constructively analyze one another's teaching practices and

procedures (Marzano, 2003). Fullan (1999) also stresses the power of a collaborative school culture. The change elements of moral purpose, power, and ideas and practices fuse in a setting replete with collaboration. “Moral purpose…gains ascendancy. Power (politics) is used to maximize pressure and support for positive action. Ideas and best practices are continually being generated, tested, and selectively retained. In collaborative cultures these three forces feed on each other” (Fullan, 1999, p. 40).

Professionalism refers to teacher efficacy, or whether or not teachers believe they are able to make positive changes in their schools. Teacher expertise and experience has been shown to have the largest influence on student achievement (Ferguson, 1991; Darling-Hammond, 1997). Marzano (2003) states that while teacher knowledge of the subject matter is vital in order to effectuate student achievement, even more important is pedagogical knowledge. Depth of subject area knowledge is not related to enhanced achievement, while knowing how to teach subject area knowledge to diverse students, i.e., knowledge of instructional strategies, is related to increased student achievement. The number of courses teachers have taken in instructional techniques is more important than the number of content area courses. Also important is participation in professional development activities (Marzano, 2003). Thus, instructional leadership must provide the professional training needed to assist teachers in developing the necessary pedagogical knowledge.

Monitoring Implementation

Once again, Fullan (1985) lists eight steps for implementing educational change, incorporating many of Huberman and Crandall’s (1983) findings. Three are pertinent here:

1. Ensure information gathering and use. Information gathering can be done formally through interviews, surveys, observation, and testing, or informally through peer interaction, interaction between peers and administrators, or interaction with other facilitators. Unless formal information gathering is linked explicitly to a procedure for acting on it, it will likely do more harm than good. Information gathered should include levels of implementation and the concerns of teachers. The information should be used for such purposes as planning more focused staff development and identifying specific leadership activities for principals.
2. Plan for continuation and spread. The district must have plans to train new teachers, incorporate the new practice into curriculum plans and job descriptions, and allocate budget line items for materials to ensure that resources continue to be available. They must make expectations clear for new leaders and provide them with assistance.
3. Review capacity for future change. A change that requires too much of personnel could impact participants' desire to implement other major changes in the future.

School leaders must monitor implementation of professional development (see also next section) content through goal setting (what will implementation look like?); data collection; and examination of data to determine if goals have been met, identify barriers that must be removed, and inform further professional development and implementation practices (Joyce & Showers, 2002).

Providing Effective Professional Development

The school leader, often working in concert with the school district or outside professional organizations, is responsible for engaging teachers in meaningful staff development activities that focus on content knowledge and student achievement. The supervisor must facilitate teacher growth toward empowerment and self-direction (Glickman, et al., 2007). If staff development is to have a substantial effect on student learning, it must involve:

1. A community of professionals who gather to study together, put new ideas into practice, and share results.
2. Content centered on curricular and instructional strategies, specifically chosen because they have a high probability of affecting student learning.
3. Content specifically chosen to expand greatly student knowledge and skill.
4. A process that allows educators to develop necessary skills to implement what they are learning (Joyce & Showers, 2002, p. 4).

In order to be most effective, professional development must be tied to specific subject areas, providing teachers the opportunity to translate instructional strategies into specific content areas and to actively try out strategies (Marzano, 2003). An adequate number of professional development days must be allocated for this purpose, and the activities presented must be part of a coherent, integrated whole and that includes observation and feedback by peers working as part of a team (Marzano, 2003). Because professional development hours are few, they must be used strategically to enhance student achievement (Joyce & Showers, 2002).

Professional development that is most likely to affect teacher instruction in a positive way must be well structured and of considerable duration, focused on specific, not general, content and instructional strategies. It would be characterized by collective participation of educators, who are given greater involvement in decision-making. Workshop training is more successful than a lecture model, as it involves active participation on the part of participants (Snow-Renner & Lauer, 2005).

Effective professional development progresses in stages: orientation, integration, and refinement. First, teachers receive an orientation, in which their concerns are addressed and they learn of the requirements and benefits of the innovation. Next, they receive assistance as they integrate the new learning into their classrooms. Finally, they refine their practice as they progress from basic knowledge through integration (Glickman et al., 2007).

Glickman, Gordon, and Ross Gordan (2007) clarify what effective professional development looks like. Effective professional development takes several forms and may be individually planned, school-wide, or district-wide. For beginning teachers, ongoing assistance should be provided throughout the first year of teaching and possibly longer. Beginning teachers benefit from being assigned a mentor, undergoing school and district orientations, and support with classroom management and instructional strategies from a team of teachers as well as the supervisor. Participation in skill development workshops, teacher institutes, and collegial support groups, and the establishment of cross-district networks, university partnerships, and teacher leadership programs provide effective professional development opportunities for experienced teachers. In order to transfer professional learning to all teachers, a group of peer coaches may be trained to deliver

instruction. Peer coaching, much researched by Joyce and Showers (2002), responds to an individual's needs, helps teachers make improvements, and transfers skills learned through professional development activities from one teacher or group of teachers to another.

Research has identified a myriad of barriers to effective professional development. Failure to take teachers beyond the orientation stage is one reason that many staff development programs are ineffective, as teachers are given rudimentary knowledge or skills but left to fend for themselves. Other barriers include inadequate funding; lack of vision; insufficient time and interference with normal school activities; personal biases; impediments resulting from certain types of relationships, group chemistry, and power structures; usefulness; lack of follow-up and input by participating parties; lack of buy-in; irrelevance to faculty and leaders; poor timing; and the sense that the delivery model is not matched to an adult learner model (Glickman et al., 2007).

Curriculum Variables Impacting Student Indian Education for All Achievement

Curriculum development is a school-level factor that impacts student achievement. The curriculum factors under examination for their effect on student Indian Education for All achievement are a guaranteed and viable curriculum and access to Indian Education for All resources used to integrate Native content into multiple curricular areas. Such resources include materials, equipment, space, time, and access to new ideas and expertise (Fullan, 2001, p. 65). In the case of IEFA, access to resources includes access to human resources.

A Guaranteed and Viable Curriculum

This is the school-level factor that most impacts student achievement and is a composite of the categories previously labeled "opportunity to learn" and "time" (Marzano, 2003). Viability concerns whether or not the teacher can adequately teach the content in the time provided. Curriculum must first be made viable, with the most important components identified, and fitting in to the allotted time period: then it must be *guaranteed*. The school specifies what content teachers are required to teach at specific grade levels and what content is supplemental, protects teachers' instruction time, and holds teachers accountable (Marzano, 2003).

Opportunity to learn. Opportunity to learn refers to whether or not a student has had the opportunity to study particular content. There are three types of curriculum: the *intended* curriculum composed of the content required by the state, district, or school to be taught in a certain class or grade; the *implemented* curriculum, composed of the content the teacher actually teaches; and the *attained* curriculum—what students actually learn. In order for students to learn the intended curriculum, states and districts must provide clear guidelines on what content must be taught and when, and individual teachers must not omit this content.

Time. In a 1994 report, the National Education Commission on Time and Learning noted that time is an overarching, critically limiting factor in school reform. Mastering new teaching strategies requires up to 50 hours of instruction, practice, and coaching, and successful urban schools require as much as 50 *days* of professional development to augment staff skills (National Education Commission on Time and Learning, 1994).

Teachers must have enough time to teach adequately what they are mandated to teach. Marzano (2003) states that on average, teachers have about 200 standards and 3,093 benchmarks to teach in 14 content areas over the course of a student's 13 years of primary and secondary education, and that it would take 15,465 hours to teach this content adequately. Unfortunately, based on a 180-day school year with 5.6 instructional hours per day, assuming each minute were used for instructional time, 13,104 classroom hours would be available for instruction over a pupil's instructional lifetime. In reality, studies have shown that the actual time devoted to instructional time is closer to 3.9 hours per day, which is the equivalent of 9,042 hours over the pupil's 13 school years. Clearly, sufficient time does not exist to meet existing standards and benchmarks (Marzano, 2003).

The implementation of a new curriculum must take multiple aspects of time into consideration. Soloman (1995) examines the concept of time from three perspectives: time as a resource; time as an element of the timetables over which change is planned, experienced, or assessed; and time in the sense of timeliness. When considering *time as a resource,* educators need to rethink how we utilize our time and organize curriculum into it. For example, interdisciplinary activities may serve to streamline curriculum while "saving" time. Justifiable use of teacher time include, but is not limited to, their time in front of the classroom. Legitimate and valuable uses of teacher time include reading, planning, collaboration, and professional development (National Education Commission on Time and Learning, 1994).

An implementation *timeline* includes organizing procedures and responsibilities for collaborative planning; building time for collaborative planning into the daily

schedule; and providing funding for additional paid preparation and collaborative planning time. Moreover, time for professional growth must be integrated into the school schedule and school culture. Developmental time for teachers, administrators, and students is required in order for each party to achieve comfort and success utilizing or experiencing new instructional strategies and content that might in fact alter the culture of the school (Soloman, 1995).

Timeliness refers to whether or not the innovation is being implemented at a time when it is likely to be well received. If teachers are besieged by too many school-wide changes and requirements, an innovation may fail because the teachers are simply too overwhelmed to successfully implement it. Additionally, the climate must be ripe—teachers must be primed—for potentially controversial or exceptionally challenging innovations to be successfully implemented (Soloman, 1995).

Guaranteed and viable curriculum and Indian Education for All. In order for teachers to teach effectively a guaranteed and viable curriculum, Marzano (2003) argues that the essential content must be separated from the supplemental content. Supplemental content is that which is not necessary for every student to learn, such as content specific to those seeking a university education. Indian Education for All is content essential to all students regardless of future profession or ultimate academic career, as required by constitutional and legislative law. Additionally, schools and school districts must ensure that the content identified as “essential” can be addressed in the amount of time available. This time/content capacity can be determined for all content areas by asking teachers and averaging their responses.

Once essential content is identified, it must be sequenced and organized in such a way that students have ample opportunity to learn it. In other words, the content to be addressed across *all* grade levels, as well as grade specific, must be determined. Administrators must monitor teachers' coverage of the essential content through conferencing, and the submittal of lesson or unit plans. And in order to fit everything in, especially as new content requirements are added like IEFA, it becomes vital that the instructional time available be protected by limiting interruptions and increasing efficient use of school time.

Access to Indian Education for All Resources

Access to Indian Education for All resources refers to the existence of print and non-print resources and teachers' ability to access them, including those provided to all Montana schools by the Montana Office of Public Instruction as well as those unique to their schools and district—resources which accurately portray the history, culture, diversity, and sovereignty of Montana Indians. It also includes access to human resources. Ideally, a human resource is a tribal individual who possess knowledge about their tribe or tribes' history, culture, traditions, or language, and have authority and permission to share tribal knowledge (T. Veltkamp, personal communication, December 26, 2008).

During the 2005-06 school year, just 3.4% of administrators, 2.5% of teachers, and 8.2% of paraprofessionals were Native American (Office of Public Instruction, 2008). With so few Native professionals employed by school districts, many schools have limited direct access to knowledgeable tribal members. In addition, tribal membership does not directly signify an individual's right or ability to speak for his or her tribe as a

whole. Native individuals may speak to their own personal experiences, but status within the tribe frequently dictates if an individual may speak for the tribe as a whole. Teachers and administrators must recognize this and distinguish when a Native staff member, parent, guest speaker, elder, or trainer is speaking from his or her own life experience or from a tribal perspective.

With this in mind, the importance of cross-cultural experiences and relationship building cannot be stated strongly enough. Teachers in predominantly White schools must create opportunities for children to interact with Indian people, and teachers themselves must put themselves in positions to interact with and learn from and alongside Native peoples. “With respect to a culture, a person can have only the most superficial understanding of a people, especially their culture, if it is based primarily on the written word and only limited direct experience of their everyday lives” (Deloria and Wildcat, 2001, p. 18).

Summary of Chapter Two

Montana is the only state that has a constitutional commitment (1972) to preserve the culture of its indigenous people via education. In 1999 a statute was passed requiring Indian Education for All (IEFA), and the Essential Understandings of Montana Indians (EUs)—foundational knowledge on which curricula were to be based—were developed by the Office of Public Instruction in collaboration with tribal leaders. In 2005 funding was allocated to carry out this mandate. Montana is home to 12 distinct tribal nations, and at least 8% of its students (more than 16,000) are Native Americans. IEFA is meant to encourage all school personnel and students to deepen their knowledge of Montana’s indigenous groups.

The rationale for IEFA is based on simple equity and self-empowerment. Historically, as a vast body of research has demonstrated, depictions of Native Americans have been based on an intricate system of stereotypes and omissions—thoroughly misleading to White America and utterly debilitating to Native Americans. (One glaring example is the widely held view that there is scant diversity among Native Americans—that all the disparate tribes together comprise but one Indian identity.) Stereotypes and omissions continue to contribute to the development of prejudice among students and a sense of inferiority by such disregarded groups as American Indians.

It is thus essential to change, on the part of teachers and students, negative and ignorant stereotypes of Native Americans and to recognize that Indian tribes have unique cultures, characteristics, and issues. IEFA is intended to accomplish just that—eradicate debasing views of Native Americans that have been perpetuated in the teaching of Montana history from a Euro-American perspective, and develop relevant curriculum that increases the self-esteem, and thus the achievement (which, compared to White Montana students, is egregiously low) and potentiality, of Indian students. As one immediate consequence, instructional models focusing on the success of Native American students and the positive assets of their cultures should decrease their dropout rates; in fact, rates have begun to drop since the 2005 funding of IEFA in Montana.

Montana is a model for Indian education in other states. Other states that have mandated IEFA (or something like it) are New Mexico, Maine, Idaho, South Dakota, Minnesota, Oklahoma, and Wisconsin, but not all initiatives are backed by funding. Some states require Indian studies courses for all students at one or several grade levels, usually as part of social science or history classes. Others strongly encourage inclusion of

Native studies into the curricula of their school districts, provide help for teachers, or require teachers to have Indian studies in order to complete their teacher training.

IEFA fits within the fabric of the broader "multicultural education" –in both theory and practice. *As theory*, multicultural education responds to American diversity and complexity, stressing the importance of understanding the diverse ethnic, cultural, and religious groups making up American society. In an ever more diverse (not to mention global) environment, multicultural education is transformative, teaching multiple perspectives and value-sets, reducing prejudice, enhancing cooperation and citizenship, spreading good will. *In practice*, endeavors toward multicultural education commenced in the 1920s, gained impetus during the Civil Rights Movement, and continue today. The restructuring of schools and staffing, curricula and testing, while focusing on minority accomplishments, have started to reflect and express the ethnic composition of America and helped to reduce stereotyping and prejudice.

The competitiveness of American society, its halting provision of tax money for services that would ensure a greater social equity among America's classes and ethnic groups, has worked against equal education for all. Hence, multicultural education should be viewed as an affirmative response to this inequity. It helps students develop respect for themselves and others. It is student-centered and hands-on, making use of the diverse knowledge and input of students, their families, and their communities as active participants in their own education. It thus empowers students so that they can all experience success.

Multicultural education is multidimensional—manifesting such functions as integration of ethnic and cultural content, combating racism and prejudice, promoting

social justice, involving *all* students while pervading school life. It requires a *critical pedagogy* based on the premise that knowledge is a social construct. It sees teachers as agents of social change and students as critical thinkers who use new knowledge to participate in democratic—yet transformative—politics. It leads, in short, to meaningful social reform in sundry areas of social life.

IEFA is one (albeit, in Montana, *major*) multicultural education endeavor, begun in earnest with the 2005 funding. Since then, curriculum has been developed, teacher training through grants and conferences has commenced, and tribal histories have been funded. Further success of IEFA depends upon collaboration between the governor, local school districts, school principals, tribal education offices, Montana tribal colleges and universities, and the Montana Office of Public Instruction. Guidelines are being developed for each school to assist in its construction of a five-year comprehensive plan for implementing IEFA. Professional development is of primary importance, as is curriculum development based on the Essential Understandings—in place of the heretofore too-common trivialization of Indian education by using only visual representations of the culture such as beadwork and the powwow.

The issue that the present study addressed was *IEFA implementation*—in terms of variables that explain and predict what promotes and what impedes it. For some time already, *general challenges* to implementation have been noted, such as the low comfort level of teachers, diversion of funding, lack of appropriate curriculum materials, and diverse visions by different stakeholders. But beyond these generalities, the present study sought to address *specific variables* as factors impacting student achievement—with actual measurement of student achievement instrumental.

Methodologically, one must begin with the large number of factors variously identified by researchers in the field of school effectiveness. Examples include: school-level (viability of curriculum, goals, community involvement, environment, professionalism), leadership elements, teacher perspectives (e.g., moral purpose of teaching), and curriculum design, to name a few. Subsuming some of the variables identified in the literature under others, and eliminating those that appear less useful or beyond the scope of the study, the researcher was left with three broad categories—leadership, teacher, and curriculum—and associated subcategories.

In order for teachers to be effective change agents, they must examine their own ideologies and personal worldviews, and then master the skills to carry out change—ultimately reform—in their classrooms. (Change also requires strong administrative and tribal support.) Moreover, it is the teacher who determines how to adapt required content from state-level or school district standards, curriculum documents, and textbooks to meet the individual learner's needs. In the case of IEFA, it should be integrated into multiple content areas throughout the school year.

School-level change depends upon the type of professional development teachers receive and ongoing support from the school and district. Strong administrative leadership and involvement aid student achievement. Specifically, this study examined the following qualities of leadership for change: (a) setting goals, (b) communicating priorities, (c) fostering collegiality and professionalism, (d) monitoring implementation, and (e) providing effective professional development.

Implementation of change by the school leaders requires the setting of clear and concrete goals by the school leaders. Goals for IEFA must be kept in the forefront by

school principals and discussed frequently. Interpersonal relationships such as optimism, honesty, and consideration must be fostered by the leadership, and professional training must be ongoing. Information should be gathered to be used for planning. Plans should be made to train new teachers, while allocating resources and assistance.

The most effective professional development is tied to specific subject areas, providing teachers the means to try out new strategies. It must be well structured and of adequate duration, going beyond basic orientation and rudimentary knowledge or skills. Access to resources including human resources is important in curriculum development.

Time is a critical factor in school reform. Curriculum must be made viable and then guaranteed, or specified as to what content teachers are required to teach at specific grade levels in order for teachers to be capable of adequately teach the content in the time provided. The student must have adequate opportunity to study particular content. Teachers must spend time learning the new teaching strategies, they must have enough time to teach, and there is not sufficient time to meet existing benchmarks as it is. An implementation timeline must be developed.

Essential content must be differentiated from supplementary content. Indian education for all is an example of content essential to all students regardless of future university or career plans. Plans must be formulated to address the content across all grade levels, determining which is grade specific. Tribal leaders who can speak from a tribal perspective, rather than a personal one, should be sought out for IEFA input. Opportunities for interactions with Indian people are important for both students and teachers.

CHAPTER THREE: METHODOLOGY

While IEFA implementation has been funded by the Montana State Legislature since 2005, little research in this emerging field has been conducted to date. As there is no research basis to inform implementation efforts, and no statewide curriculum or benchmarks for student achievement, implementation has thus far been inconsistent and challenging. It is unknown which teacher, leadership, or curriculum variables predict student acquisition of IEFA knowledge, nor is it known how well students are currently achieving in this area.

Research Design

The first portion of this study measured fifth grade students' knowledge of Indian Education for All content through the administration of an assessment designed by the researcher. This assessment consists of both forced-choice and open-ended questions, and is based on the Essential Understandings of Montana Indians and the IEFA benchmarks for student learning that are embedded in the Montana State social studies standards. It was administered by the fifth grade classroom teachers and school librarians located in Missoula County schools in February 2009.

The second portion of the study utilized a survey questionnaire in order to collect data about teacher, leader, and curriculum variables that predict student achievement in Montana Indian Studies. It was administered by the researcher to a volunteer sample of second through fifth grade teachers in February of 2009. Predictor variables of student achievement were identified and authenticated through an intensive review of the literature. This examination lent rigor to the study and allowed for a consensus of salient variables related to successful implementation of new curricula. The survey questionnaire

focused on the identified predictor variables to determine, upon analysis, which had the greatest affect on the student achievement in Montana Indian Studies.

The survey and one-shot assessment design was chosen in order to achieve rapid responses from participants (Babbie, 2001). The data was collected directly by the researcher at one point in time through the use of a survey questionnaire. This cost-effective method allowed the researcher to survey the entire population of Missoula County second, third, fourth, and fifth grade teachers and elementary school principals expeditiously.

Research Question

The overarching research question was:

1. Are teacher, leadership, or curriculum variables most predictive of student knowledge of Indian Education for All content?

Sub-questions:

1. Which teacher variables are most predictive of student knowledge of Indian Education for All content?
2. Which leadership variables are most predictive of student knowledge of Indian Education for All content?
3. Which curriculum variables are most predictive of student knowledge of Indian Education for All content?

Variables and Level of Data

The predictor variables—i.e., teacher, leadership, and curriculum variables—are discrete variables. Predictor variables included the following:

1. Teacher Variables

a. *Commitment to the moral purpose of teaching* refers both to making a difference in the lives of students, particularly the disadvantaged, and shaping the development of our society through the educational system (Dewey, 2004; Fullan, 1993; Fullan, 1999). Teachers committed to the moral purpose of education value diversity and are committed to implementing Indian Education for All reforms.

b. *Classroom curriculum design* is how the individual teacher sequences and paces the required content, adapts it to meet individual learner's needs, and structures students' learning activities (Marzano, 2003; Marzano, Waters, & McNulty, 2005). The design and implementation of IEFA curriculum requires integration into multiple content areas yearlong.

c. *Professional development participation* refers to the quantity of high-quality professional learning opportunities in which teachers engage, either due to personal choice or school and district requirements that directly support student learning (Huberman & Crandall, 1983; Joyce & Showers, 2002) of IEFA content.

d. *Familiarity with available IEFA resources* refers to: (1) teachers' knowledge of the existence of resources provided by OPI and their schools and districts; and (2) their ability to use these resources to support their instructional objectives (T. Veltkamp, personal communication, December 26, 2008).

2. Leadership Variables

a. *Approaches change implementation according to change theory* refers to the utilization of a theory-based implementation plan when striving to implement new curriculum or systemic school change. A theory-based implementation plan includes establishing and communicating priorities, setting specific goals, fostering an environment of collegiality and professionalism, monitoring implementation during and upon implementation, and providing effective professional development opportunities (Fullan, 1985; Glickman, Gordon, and Ross Gordon, 2007; Huberman & Crandall, 1983; Joyce & Showers, 1980, 2002; Marzano, 2003; Marzano et al., 2005).

3. Curriculum Variables

   a. *A guaranteed and viable curriculum* is one that stipulates clearly what content teachers are required to teach at specific grade levels: essential content must be identified, sequenced, and organized, ensuring teachers have the time to teach the content and that all students have the opportunity to learn it (Marzano, 2005).

   b. *Access to Indian Education for All resources* refers to the existence of print, non-print, and electronic resources for use in integrating IEFA into various content areas, such as mathematics, social studies, science, language arts, and fine arts. It also refers to teachers' ability to access these resources, which include those provided to all Montana schools by the Montana Office of Public Instruction as well as those unique to their schools and districts—resources that accurately portray the history,

> culture, diversity, and sovereignty of Montana Indians. It includes access to human resources. Ideally, a human resource is a tribal individual who possesses knowledge about his/her tribe or tribes' history, culture, traditions, or language, and has authority and permission to share tribal knowledge (T. Veltkamp, personal communication, December 26, 2008).

The outcome variable was students' test scores on the researcher created achievement test measuring student knowledge of Essential Understandings administered in March of the fifth grade year. These scores are expressed in number of points earned out of 100 possible and thus are ratio level data, also referred to as a *continuous* variable.

Population

The population for this study included all Missoula County elementary school principals, second through fifth grade teachers, and fifth grade students—thus involving 21 schools ranging in size from nine students to over 500 students. All principals and teachers in these 21 schools were asked to participate in the study, along with all fifth grade students. The population of principals numbers 23, including one superintendent who acts as principal and the county superintendent who oversees several small rural schools (Missoula County Superintendent's Office, 2008a). Data was obtained from a sample of at least 11 principals, resulting in a confidence level of 34%.

The population of teachers of grades two through five in Missoula County is approximately 188. Data was obtained from a sample of 126 teachers, meeting the requirements of the central limit theorem and ensuring a confidence level of 94%.

The population of fifth grade students numbers approximately 991 (Missoula County Superintendent's Office, 2008b). All fifth grade students in Missoula county

elementary schools were asked to complete the student assessment, though data was obtained from a sample of 512, meeting the requirements of the central limit theorem and ensuring a confidence level of 99.9%.

Data Collection Procedures

Permission to conduct research with fifth grade teachers and their students was secured through district superintendents, the county superintendent, and school principals. Teachers or school librarians administered the student assessment to fifth grade classes during a two-week window in late March. Data on teacher, leadership, and curriculum variables were collected through use of a researcher-designed quantitative survey administered either by the researcher or by the school principal to second through fifth grade teachers and principals in Missoula county schools. Teachers participating in the study were assured that their participation was voluntary. Teachers separated the consents from the surveys, placing each in an envelope collected by the researcher. Principals' access to collection envelopes was controlled to ensure teachers felt as comfortable as possible honestly answering questions about their school leader.

Fifth grade students who failed to complete all pages of the student assessment were excluded from the study. Teachers who taught at schools outside of Missoula County and principals who worked outside of Missoula County at any point during the previous three and half years, and with varying years of experience, were included in the study. However, to control for possible variance (experienced teachers vs. inexperienced teachers; teachers or leaders from outside of Missoula County or Montana), groups were formed through the collection of demographic data to be used in determining if there were meaningful differences in responses between groups.

Measurement Instruments

The teacher and principal survey instrument consisted of two parts. The first portion was a tiered survey questionnaire. Participants answered forced choice questions. This enabled the reporting of descriptive statistics, including percentages of participants who responded in a particular way and mean scores on individual items. The first portion of the questionnaire addressed participant variables in order to provide potentially useful demographic information and control for extraneous variables. The second portion of the teacher and principal survey recorded responses to questions concerning leadership, teacher, and curriculum variables.

The student assessment consisted of test items designed to measure fifth graders' knowledge of Indian Education for All. Test items were included that address each of the Essential Understandings of Montana Indians as well as the IEFA benchmarks that have been incorporated in the Montana State social studies standards.

Reliability and Validity: Because the teacher, leader, and student assessments are researcher created and thus untested, the reliability of the instruments is undetermined. Should the instruments be utilized in a future study, the reliability coefficients may then be calculated. Internal consistency will be tested using Cronbach's alpha. This study serves as a pilot for the reliability of these instruments.

The instruments used have face validity. Test items were composed of questions matched to each of the predictor variables addressed and verified in the review of the literature. Additionally, many test items were modified from a questionnaire designed by Marzano, Waters, and McNulty (2005), experts in the field of curriculum and instruction. Validity was strengthened by pilot testing the teacher and leader questionnaires with a

group of similar test subjects, including teachers otherwise excluded from the study. Four kindergarten and first grade teachers pilot tested the teacher instrument while two high school principals pilot tested the leader instrument. Each individual made notations about confusing survey items allowing the researcher to modify the instrument prior to its implementation. This ensured that the test construction was comprehensible by guaranteeing the directions were clear, test items were unambiguous, and avoided vague or unclear vocabulary and sentence structure (Gay & Airasian, 2000).

In order to establish content validity, the student assessment was composed of questions based directly on the Indian Education for All benchmarks that have been incorporated into the fifth grade Montana State social studies standards and the seven Essential Understandings of Montana Indians (EU's). Each fifth grade social studies benchmark and EU was represented in equal proportion. Additionally, the student assessment was reviewed by three members of the Indian Education Division at the Montana Office of Public Instruction through the entire development process to strengthen its accuracy and ensure test items were appropriate for fifth graders. These outside evaluators—one the acting director of the division, one an Indian Education Implementation Specialist, and the third an Indian Education Curriculum Specialist—checked that each test item accurately matched up with the Essential Understanding and social studies benchmark for which it was intended to measure comprehension.

The student assessment was pilot tested with a group of similar aged test subjects in order to ensure that the test construction was comprehensible and to strengthen validity. One fourth grade class took the assessment, noting areas of confusion in the margins. Then, after modification, two fifth grade students pilot tested the instrument

using a think aloud strategy, where each test item was discussed during the completion process. Only upon final revision and approval by the Indian Education Division at OPI was the student assessment determined ready for use in the study. These processes guaranteed that directions were clear, test items were unambiguous, and vocabulary, sentence structure, and content was age-appropriate (Gay & Airasian, 2000).

Data Analysis

Mean scores were computed for the reporting of student achievement on the student assessment. Teacher and leader data, obtained primarily through Likert scales, were tallied and used to report central tendencies and variability.

Next, multiple regression statistics were utilized to analyze data collected from the teacher and leader surveys and the student assessment. Using the multiple regression feature of the SPSS statistical package, the teacher, leader, and curriculum variables were used to determine if a predictive relationship existed between the independent variables (teacher, leader, and curriculum variables) and the outcome variable (student IEFA achievement). This procedure permitted the researcher to examine which predictor variables were accounting for the most variance in the outcome variable. Multiple regression not only provided data on whether variables were related, but also the degree to which they were related (Gay & Airasian, 2000).

Summary of Chapter Three

This study measured fifth grade student achievement in IEFA through the administration of a researcher-created assessment tool. Teacher, leader, and curriculum variables were measured using two researcher-created survey questionnaires administered to school principals and second through fifth grade teachers. Student achievement was a

continuous outcome variable, while the teacher, leader, and curriculum variables were discrete, predictor variables. The assessment and questionnaires were administered to voluntary participants of each population, with an adequate sample size sought from each group. Multiple regression statistics were used for data analysis using the SPSS statistics package. The result was intended to provide guidance for a richer implementation of IEFA in the future.

CHAPTER FOUR: DATA ANALYSIS

This chapter consists of a description of the study sample followed by the results of the statistical analysis. First, demographical information for each subgroup of the sample is reported. This is followed by restatement of the problem and review of the research question. Next, descriptive statistics, specifically frequency data collected from teachers and leaders, in which participants reported on their use of materials, implementation behavior, and implementation needs is summarized. Then, the procedures utilized to screen data are described and the results of the statistical analysis presented, including results of reliability tests. Lastly, the statistical results are summarized.

Location of the Study

This study occurred in Missoula County in the State of Montana. The U.S. Census Bureau population estimate for Missoula County in 2007 was 105,650 out of a total population for Montana of 957,861. The city of Missoula is the county seat and is classified by the Census Bureau as a metropolitan area, with 36.9 persons per square mile as compared with only 6.2 for the entire state. There are no Indian reservations located in Missoula County, the nearest being the Flathead Reservation, comprised of the Salish, Kootenai and Pend O'Reille Indian tribes, located just 20 miles north of Missoula.

Between April 1, 2000 and July 1, 2007, population growth for Missoula County was 10.3% as compared to 6.2% for the entire state. Population of persons under the age of 18 in 2007 was estimated to be 21.0% of the population compared to 22.9% statewide. Caucasians made up 93.7% of Missoula County residents as compared to 90.6% statewide. In Missoula County, American Indians and Native Alaskans comprised 2.6% of the total population, but statewide, 6.3% of the population was Native American (U.S.

Census Bureau, 2007). Other ethnic groups included Asian persons: 1.3% of Missoula County vs. 0.7% of the state; Black persons: 0.7% and 0.6% statewide; Native Hawaiian and other Pacific Islanders: 0.1% and 0.1%; Hispanic or Latino origin: 2.4% vs. 2.8%. (These statistics are for persons reporting only one race; the percentage of persons reporting their ethnic makeup to be of two or more races was estimated in 2007 to be 1.7% for both Missoula County and the state as a whole.) Foreign-born persons living in Missoula County in 2000 were 2.3% vs. 1.8% statewide, while percentage of persons 5 years and older who spoke a language other than English in the home was 4.8% in Missoula County and 5.2% statewide in 2000.

In 2000, within Missoula County 91.0% of the population age 25 and over were high school graduates, compared to 87.2% statewide. The percentage of the Missoula County population age 25 and over with Bachelor's degrees was 32.8% compared to 24.4% statewide. Median household income was $42,598 in Missoula in 2007 compared with $43,000 statewide. Percentage of people living below the poverty rate was 16.3% compared to 14.1% statewide.

Population of the Study

The population for this study included all Missoula County elementary school principals, second through fourth grade teachers, fifth grade teachers, and fifth grade students—thus involving 21 schools ranging in size from nine students to over 500 students. At the time of the study, there were 22 principals, including one who served as superintendent. The number of teachers in grades two through four in Missoula County was approximately 143, while that of fifth grade teachers was approximately 45. Fifth grade students numbered approximately 991 (Missoula County Superintendent's Office,

2008b). Class sizes ranged from one student at extremely rural schools to 28+ students at urban schools. School districts ranged in size from one rural two-room kindergarten through eighth grade schoolhouse overseen by the county superintendent to one of Montana's largest school systems containing nine elementary schools, three middle schools, and three high schools overseen by a district superintendent.

Description of the Sample

A total of 172 surveys were sent to second through fifth grade teachers at all but two of Missoula County schools (which chose not to participate in this study). Of those, 86 were returned. Similarly, 18 principal surveys were sent out to school principals with 11 returned. Approximately 900 fifth grade student assessments were sent to schools. Of those, 522 were returned.

Demographic information was obtained from 82 teachers (four respondents were eliminated for failure to complete this portion of the survey) which included data on the following: years of teaching experience, years teaching in Montana, number of University-level Native American Studies courses completed, number of University-level multicultural education courses completed, number of professional development hours earned focusing on Indian Education for All implementation, age, and level of education. Means for all teachers and means for fifth grade teachers, as well as the range of responses, are summarized in Table 1. The results show that there is no substantial difference between the means of all teachers and that of fifth grade teachers on any of the demographic variables. Thus, the two groups appear to be comparable.

Table 1

Summary of Teacher Demographic Means

	All Teachers Mean	All Teachers Range	Fifth Grade Teachers Mean	Fifth Grade Teacher Range
Years Teaching Experience	17.7	1-40	18.6	2-38
Years Teaching in MT	16.8	1-40	17.0	2-36
Number NAS Courses	1.5	0-8	1.5	0-5
Number Multicultural Education Courses	1.4	0-6	1.7	0-6
Number IEFA Professional Development Hours	18.1	0-74	18.5	6-60
Average Level of Education	Master's Degree	Bachelor's to Doctorate	Master's Degree	Bachelor's to Doctorate

Demographic information obtained from each principal included data on the following: years of experience as a principal; years in Montana as a principal, number of University-level Native American Studies courses completed, number of University-level multicultural education courses completed, number of professional development hours focusing on Indian Education for All implementation earned, and level of education. Table 2 summarizes the demographic means of principals.

The demographic data demonstrates that both teachers and school principals are, on average, experienced Montana educators. On average, teachers have taken slightly more Native American studies and multicultural education courses, and approximately one more hour of IEFA-related professional development. Teachers and leaders in the sample have on average obtained a Master's Degree and a Master's Degree plus three or more courses, respectively.

Table 2

Summary of Principal Demographic Means

	Principal Mean	Principal Range
Years Experience as Principal	15.5	4-28
Years in Montana	14.3	4-28
Number NAS Courses	1.1	0-5
Number Multicultural Education Courses	.9	0-5
Number IEFA Professional Development Hours	17	0-30
Average Level of Education	Master's Degree + 3 or More Courses	Master's to Doctorate

The student, teacher, and leader samples used for the purposes of descriptive analysis include all individuals who submitted a complete student assessment or teacher or leader survey. The samples used for the purpose of multiple regression analyses include all students who completed a student assessment whose corresponding fifth grade classroom teacher completed a teacher survey.

Sample for Descriptive Analysis

A total of 522 fifth grade students attending 12 different schools located in Missoula County completed the student IEFA assessment in March 2009. These students represented 28 classes ranging in size from three students to 24 students. Of these, assessment scores from 10 students were not included in any of the statistical analyses because of lack of completion of the assessment instrument. Thus, the mean for overall student achievement was obtained from a student sample size of 512.

A total of 22 fifth grade teachers completed the teacher survey in March 2009. Additionally, 64 second, third, and fourth grade teachers completed the teacher survey. In total, 86 teachers completed the teacher survey, representing 13 schools.

Nine principals and one school superintendent of a small rural school lacking a principal-leader completed the leader survey in March 2009, representing nine schools.

Sample for Multiple Regression Analysis

A total of 23 fifth grade teachers from 10 schools completed the teacher survey in March 2009. The total number of students in these 23 classes was 424. Due to several 5th grade teachers declining to complete a teacher survey, their students were by necessity dropped from this analysis though included in the descriptive portion of the study. Class size ranged from five students to 24 students. Thus, the multiple regression analysis in which fifth grade students were matched with fifth grade teachers was run from a sample of 23 fifth grade teachers and 424 fifth grade students.

Restatement of the Problem

A lack of research exists concerning Indian Education for All implementation. While resources have become more widely available and in fact been disseminated by the Office of Public Instruction to every public school, it has remained unknown how much knowledge teachers have of these resources, how frequently they use them, and if teacher and student access to such resources has increased student knowledge of IEFA content. There is a shortage of research on the role of the school leader in the IEFA change process and on what curriculum variables impact student IEFA understanding. As a result of the dearth of research, it is not known which variables most significantly impact student learning of Indian Education for All content. In short, the problem is twofold: (a)

it is not known how well students are learning what is mandated to be learned, and (b) it is not known which precise variables impact this learning.

Research Question

The overarching research question is:

1. Are teacher, leadership, or curriculum variables most predictive of student knowledge of Indian Education for All content? In order to fully examine this question, the following sub-questions will be addressed:

Sub-questions:

A. Which teacher variables are most predictive of student knowledge of Indian Education for All content?
B. Which leadership variables are most predictive of student knowledge of Indian Education for All content?
C. Which curriculum variables are most predictive of student knowledge of Indian Education for All content?

Data Screening and Descriptive Statistical Analysis

Prior to analyzing the data, the predictor and outcome variables were examined using the Frequencies and Explore programs of SPSS 17.0 statistical package for Windows. A total of 512 student cases, 23 fifth grade teacher cases, 63 second through fourth grade teacher cases (for a total of 86 teachers), and 10 leader cases were entered. Data was thoroughly checked for accuracy of entry.

Results of Descriptive Statistical Analysis

The results of the descriptive statistical analysis included the computation of the overall student mean, frequencies of resource usage and IEFA implementation behavior

by teacher and/or leader, and percentages of teacher and leader respondents who indicated a specific need to help them achieve IEFA implementation.

Student Mean

The overall student mean achievement score was computed based on 512 completed student assessments. Table 3 reports means and range by school and teacher.

Table 3

Fifth Grade Student Means (N=512)

School	Teacher	Mean	Range	Standard	N
ALL	ALL	36.6	14-59	7.0	512
1	1	36.4	25-48	5.8	20
1	2	37.1	29-46	4.9	20
1	3	40.7	28-48	4.9	15
2	4	33.9	23-43	5.1	20
2	5	42.0	28-52	7.5	22
2	6	36.9	23-46	6.8	23
2	7	38.3	21-50	7.1	19
2	8	46.2	19-53	7.7	22
2	9	33.5	20-46	7.8	15
3	10	35.8	21-47	6.4	23
3	11	38.9	25-53	6.5	22
3	12	35.9	14-45	7.5	19
4	13	49.3	45-52	3.8	3
5	14	33.0	26-40	4.4	15
5	15	33.7	20-43	6.4	13
6	16	37.9	29-54	6.4	20
7	24	31.8	16-39	6.6	20
7	25	33.1	20-49	8.1	19
8	17	34.7	20-45	6.1	21
8	18	33.0	19-42	6.2	21
9	19	40.8	24-59	8.2	19
9	20	37.5	21-53	6.7	23
9	21	35.3	30-41	3.5	17
10	22	40.2	33-48	5.9	5
11	23	37.4	26-44	4.4	23
12	26	38.7	30-48	5.4	15
12	27	35.4	20-46	8.4	18
12	28	32.0	22-46	5.8	20

Frequencies and Percentages

Teachers and principals were asked a number of questions about the use of materials, implementation behavior, and implementation needs. Teachers and principals answered similar questions as well as questions tailored to their specific positions. Thus, comparisons may be made between teachers' and principals' answers to specific questions. Tables 4 and 5 provide a summary of frequency information for teachers' and principals' IEFA implementation behavior.

Table 4

Frequencies of Behavior: All Teachers

All Teachers						
Frequencies	Never	1x yr	2-3 x yearly	4-5 x yearly	6 + x yearly	Median
IEFA Professional Development participation yearly	11	45	24	3	2	1x yearly
Yearly Average over last three years—use of Native guest speakers	19	34	25	5	2	1x yearly
Principal discusses need for IEFA implementation yearly	10	27	36	4	9	2x yearly
School district offers IEFA professional development yearly	17	28	35	12	2	2x yearly
School offers IEFA professional development yearly	20	29	29	7	0	1x yearly

Table 5

Frequencies of Behavior: Principals

	Principals					
Frequencies	Never	1x yearly	2-3x yearly	4-5x yearly	6 + x yearly	Median
IEFA Professional Development participation yearly	0	4	4	1	1	2x yearly
Yearly Average over last three years—use of Native guest speakers	0	4	4	1	1	2x yearly
Principal discusses need for IEFA implementation yearly	0	2	6	1	1	2x yearly
School district offers IEFA professional development yearly	0	2	6	1	1	2x yearly
School offers IEFA professional development yearly	1	4	4	1	0	1.5x yearly
Sent teachers to IEFA conferences yearly	0	4	4	0	2	2x yearly

Median responses on survey items were utilized rather than mean scores since the range of possible answers did not allow for accurate reporting of averages. Examining median scores, teachers reported slightly less yearly participation (1x per year) in IEFA professional development activities than principals reported in their reflection on teacher IEFA professional development participation (two to three x per year). Teachers also reported slightly less average yearly use of Native guest speakers at whole school or classroom events (1x per year) than principals reported in their reflection on teacher use

of Native guest speakers at whole school or classroom events (two to three x per year). Both groups reported that the principal discusses the need for IEFA implementation two to three times yearly, and that the school district offers IEFA professional development two to three times yearly. Principals reported that their school offers IEFA professional development slightly more often than teachers reported (a median of 1.5 which corresponds approximately to two times yearly versus teachers report of one time yearly). Finally, principals reported that they sent teachers to IEFA professional development two to three times yearly.

Teachers reported specific needs that would enhance their ability to implement IEFA. Similarly, principals reflected on what would help their teachers successfully implement IEFA. Table 6 summarizes these findings.

Overall, teachers and principals agreed or strongly agreed that interaction with Native people for themselves (91.3% and 90%, respectively) and their students (92.4% and 100%, respectively) would enhance the ability of teachers to implement IEFA. Some 82.4% of teachers agreed that district level IEFA professional development and attending conferences where they can self-select sectionals of interest would help them implement IEFA. Similarly, 77.1% of teachers agreed that participation in an intensive IEFA implementation institute would be beneficial. Finally, 90% of principals and 64.8% of teachers felt that state standards guiding IEFA implementation would help in this process.

Table 6

Teacher and Principal Needs Frequencies

	Teachers		Principal	
(In Percentages)	Strongly Disagree or Disagree	Agree or Strongly Agree	Strongly Disagree or Disagree	Agree or Strongly Agree
School level IEFA professional development	16.5	76.9	N/A	N/A
District level IEFA professional development	12.1	82.4	N/A	N/A
Attend conferences; self-select sectionals	8.8	82.4	N/A	N/A
Participate in intensive IEFA implementation institute	21.0	77.1	N/A	N/A
State standards to guide IEFA implementation	27.5	64.8	10	90
Opportunities to interact with Native people	3.3	91.3	10	90
Children's literature	24.2	69.2	10	90
School district provide more resources	35.2	57.2	30	70
OPI provide more resources	28.6	61.6	30	70
Student interaction with Native people	2.2	92.4	30	100

Note. N/A—principals were not asked these questions Percentages may not equal 100 as some participants answered n/a (not applicable)

Regarding acquisition of resources, 90% of principals and 69.2% of teachers agreed that more children's literature was needed to assist in IEFA implementation. In addition, 70% of principals and 57.2% of teachers desired school districts to provide more resources, and 70% of principals and 61.6% of teachers desired OPI to provide

more resources. Teachers also reported on their use of resources already sent to every school library by the Office of Public Instruction. Table 7 provides use data on resources.

Table 7

Frequency of Use—OPI resources sent to schools

Number of teachers who have used item	Item Name
None	*Two Worlds at Two-Medicine*
1-5	*American Indian Contributions to the World*
	History of the Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation
	Mary Quequesah's Love Story
	Native America in the Twentieth Century
	Native North American Almanac
	Tribal Nations: The Story of Federal Indian Law
	We, the Northern Cheyenne People
6-10	*Assiniboine Chief Rosebud Remembers Lewis and Clark*
	Challenge to Survive: History of the Salish Tribes of the Flathead Indian Reservation
	Encyclopedia of American Indian Contributions to the World
6-10	*How the Summer Season Came and Other Assiniboine Indian Stories*
	Owl's Eyes and Seeking a Spirit: Kootenai Indian Stories
	A Process Guide for Realizing Indian Education for All
	Lesson Plan for The Story of the Bitterroot
	The Turtle Who Went to War and other Sioux Stories
11-15	*American Indian Music: More Than Just Flutes and Drums*
	Connecting Cultures and Classrooms
	Directory of Indian Education Programs in Montana
	The Story of the Bitterroot
	Talking Without Words
	View from the Shore
16-20	*Arlee Public Schools K-12 Literature Units*
	Heart of the Bitterroot
	How the Morning and Evening Stars Came to Be
	Long Ago in Montana
	Montana Indians: Their History and Location
21-25	*A Broken Flute*
	How Marten Got His Spots
	Model Lesson Plans Social Studies
21-25	*Tribes of Montana and how They Got Their Names*
26+	*Coyote Stories of the Montana Salish Indians*
	Fire on the Land/Beaver Steals Fire

Data Screening and Multiple Regression Statistical Analysis

For the purposes of exploratory research on factors contributing to student IEFA achievement, a multiple regression analysis was utilized to determine if teacher, leader, or curriculum variables were predictive of student IEFA achievement. This research was exploratory in nature because it was the first time an attempt was made to determine factors predictive of student IEFA achievement. The instruments used for this purpose were new and untested, and number of respondents low. However, prior to analyzing the data, the predictor and outcome variables were examined using the Frequencies and Explore programs of SPSS 17.0 statistical package for Windows. A total of 512 student cases, 23 fifth grade teacher cases, and 10 leader cases were entered. Data was thoroughly checked for accuracy of entry.

Assumptions

Distributions of the data were examined for sample size, normality, outliers, linearity, and multicollinearity. Because of the small number of leader cases, multiple regression analysis could not be performed with this sample. However, the number of teacher cases was sufficient to run a multiple regression analysis (to predict achievement score by teacher). In order to meet the requirement of, at minimum, five cases per independent variable (Garson, 2009) it was necessary to collapse all subvariables and only measure the effect of the overarching teacher, leader, and curriculum independent variables on student achievement, the outcome variable.

An examination of the Normal Probability Plot indicated a fairly normal distribution, with no extreme departure from normality. An examination of the scatterplot indicated linearity of residuals. Outliers were checked through a visual examination of

the scatterplot and through an examination of the Mahalanobis distance, which did not exceed the critical value for cases with three independent variables. Thus, it was unnecessary to make adjustments to the data. Multicollinearity, or correlations between independent variables, was low as based on an examination of tolerance and the variance inflation factor. The assumptions for multiple regression were sufficiently met.

Missing Data

For the purposes of computing mean scores per survey item, extrapolation was used to fill in missing datum points. Missing values were substituted with the overall mean for the specific item. Next, excessively skewed survey items as indicated by a skewness measurement greater than ±1 were eliminated from further analysis in order to meet the assumption of normality (Leech, Barrett, & Morgan, 2008). In order to compute totals for each subvariable and composite variable, the response 0 (not applicable) was not considered missing data, nor was it figured into the mean.

Results of Multiple Regression Analysis

Fifth grade teachers answered a variety of questions designed to measure the teacher, leader, and curriculum variables and corresponding subvariables. The range of possible answers was as follows: 0=N/A; 1=strongly disagree; 2=disagree; 3=agree; 4=strongly agree. Answers to questions stated in the negative were converted utilizing the Recode function of the SPSS statistical package. Teachers' answers to questions measuring leadership variables represent their personal reflection on their leader's behavior.

Teacher, leader, and curriculum scores on the teacher survey, measured on a 4-point Likert scale and averaged, are displayed in Table 8 and a total mean computed for

each variable and subvariable. Student mean scores by teacher, the dependent variable, were computed out of a possible 64 points possible on the student assessment. The total mean for student achievement by classroom teacher was 37.1.

A high mean score for teacher subvariables indicates the existence of a strong commitment to the moral purpose of teaching, an organized and systematic classroom curriculum design, high levels of professional development participation, and high familiarity with available IEFA resources. A high mean score for leader subvariables indicates that the school leader utilizes principles of change theory, establishes and communicates priorities, sets specific goals, fosters an environment of collegiality and professionalism, monitors change implementation during and upon implementation, and provides effective professional development opportunities. A high mean score for curriculum variables indicates the existence of a guaranteed and viable curriculum and greater access to IEFA resources.

Table 8

Summary of Means by Teacher

School	1			2						3			4	5		6	7		8			9	10	Totals
5th grade teacher	1	2	3	4	5	6	7	8	9	10	22	23	11	12	13	14	15	16	17	18	19	20	21	
Student mean	36.4	37.1	40.7	33.9	42	36.9	38.3	46.2	33.5	35.8	38.9	35.9	49.3	33	33.7	37.9	34.7	33	40.8	37.5	35.3	40.2	37.4	37.1
Teacher Variables	2.7	3.3	2.7	3.1	2.7	2.6	3.1	2.8	2.8	2.8	3.4	2.9	2.4	2.8	2.7	3.0	2.4	2.8	3.3	3.1	2.6	2.2	2.8	2.8
Commitment to moral purpose of teaching	2.7	3.8	3	3.6	3.1	3.2	3.3	3.1	3.1	2.9	3.9	3.2	2.6	3.1	2.8	3.4	3.3	3.7	3.8	3.1	3.5	2.8	3.3	3.2
Classroom curriculum design	2.6	3.2	2.4	3.2	2.6	2.7	3.3	2.7	2.8	2.7	3.3	2.9	2.4	2.9	2.5	2.9	2.3	2.9	3.4	2.9	2.8	2.2	2.6	2.8
Profession. develop. participation	2.7	3.1	2.2	3	2.7	2.7	3.3	3	2.4	2.9	3.2	2.7	2.1	2.6	2.9	3.0	1.9	2.2	2.9	3.0	2.3	2	2.7	2.7
Familiarity w/ IEFA resources	2.8	3.2	3.2	2.8	2.6	2.2	2.6	2.4	2.8	2.6	3.2	2.8	2.4	2.8	2.6	2.8	2	2.6	3.0	3.4	1.8	1.8	2.6	2.7
Leader Variables	2.5	2.8	2.2	3.3	2.5	2.1	2.2	2.3	2.6	2.6	2.2	2.8	2.5	2.9	2.8	3.4	2.6	2.2	2.6	2.5	2.1	2.1	2	2.5
Leadership for change	2.2	3.2	2.4	3.5	2.7	2.3	2.4	2.9	3.2	3	2.3	3	2.8	3.3	3	3.6	3.2	3	2.2	2.2	2.2	2.6	2.5	2.8
Commun. priorities	2.9	2.6	2	3.1	2.7	2.1	2.6	2.3	2.4	2.4	1.9	2.6	2.1	2.4	2.5	3.3	2.9	1.7	3	2.4	2.1	1.7	2.4	2.4
Setting goals	2.7	2.5	2.2	2.8	1.9	1.3	2.0	1.8	1.8	2.2	1.3	2.5	2.5	2.7	2.7	3.2	2.2	1.5	2.3	2.5	1.5	1.4	1.2	2.1
Collegial & prof. environ.	2.4	3.3	2.7	3.6	2.6	2.8	1.8	2.8	3.2	3	3.2	3.3	2.5	3.1	2.9	3.4	3.1	2.9	2.7	2.5	2.4	2.6	2.9	2.9
Monitor implemention	1.8	2.8	2	3.3	2.5	1.8	2.3	1.8	2	2.8	2	2.3	2.5	3	3	4	2.3	2.3	2.3	2.5	1.3	2.5	1	2.3
Providing profess. develop. opport.	3	2.5	2	3.3	2.3	2.3	2.3	2.3	2.8	2.3	2.7	3	2.5	2.7	2.7	3	1.8	1.8	3	2.8	2.8	2	2.2	2.5
Curriculum Variables	2.6	2.8	2.1	3	2.5	2.5	2.4	2.6	2.6	2.6	2.5	2.9	2.3	2.5	2.3	2.8	2.1	2.5	2.2	2.9	2	2.1	2.7	2.5
Guaranteed & viable curriculum	2	2.4	1.9	3	2.5	2.5	2.1	2.4	1.9	2.3	2.1	2.6	2.2	2	2.3	2.8	2.1	2.3	2.1	2	1.3	1.9	2.6	2.2
Access to IEFA resources	3.1	3.3	2.3	3	2.6	2.4	2.7	2.9	3.3	3	2.9	3.1	2.4	3	2.4	2.9	2.1	2.7	2.3	3.9	2.7	2.3	2.9	2.8

The total mean score for teacher variables was 2.8, while the total mean scores for leader and curriculum variables were both 2.5. Teacher means for each predictor variable, along with the mean of the outcome variable, student achievement, were entered into a SPSS multiple regression analysis.

Reliability

To assess whether the teacher survey items (which were averaged to create the teacher, leader, and curriculum variable means with which statistical tests were run) formed a reliable scale, Cronbach's alpha was run for each subvariable and again for each composite variable. The alpha for each variable and subvariable are listed in Table 9. A value above 0.7 indicates a scale with good internal consistency. All variables and subvariables, with the exception of familiarity with IEFA resources (0.35), establishing and communicating priorities (0.65), providing professional development opportunities (0.63) and the composite score for curriculum variables (0.57) met or exceeded the 0.7 alpha level. Only familiarity with IEFA resources and the composite score for curriculum variables were exceptionally low. Conversely, items with an alpha above 0.9 indicate redundancy in scale items (Leech, Barrett, & Morgan, 2008). Commitment to the moral purpose of teaching (0.94) and the composite for leadership variables (0.91) both have very high alpha levels.

Table 9

Cronbach's Alpha Measure of Internal Consistency

Variable	Cronbach's Alpha
Teacher Variables	0.88
Commitment to moral purpose of teaching	0.94
Classroom curriculum design	0.82
Professional development participation	0.75
Familiarity w/ IEFA resources	0.35
Leader Variables	0.91
Leadership for change	0.76
Establish & communicating priorities	0.65
Setting specific goals	0.81
Fostering collegial & prof. environ.	0.77
Monitoring implement.	0.75
Providing professional development opportunities	0.63
Curriculum Variables	0.57
Guaranteed & viable curriculum	0.8
Access to IEFA resources	0.71
All Variables	0.9

Multiple Regression Analysis Findings

A multiple regression analysis was run by entering all three predictor variables into the equation simultaneously in order to determine if any statistically significant

relationships exist between all three predictor variables and the outcome variable. The correlation matrix displayed in Table 10 displays the intercorrelations between variables.

Table 10

Correlation Matrix for Teacher, Leader, and Curriculum Variables

Variable	1	2	3
Student IEFA Achievement	-.15	-.25	-.18
Predictor Variable			
1. Teacher	-	.31	.53
2. Leader		-	.53
3. Curriculum			-

While correlations between teacher and curriculum variables, and leader and curriculum variables, are both above 0.5, none is significant at the 0.05 level. Examination of the tolerance values further tests for problems with multicollinearity. Since the tolerance value for each predictor variables is greater than1- R^2, problems with multicollinearity do not exist.

As reported in Table 11, the Beta value for the teacher variable is -.07, for the leader variable -.21, and for the curriculum variable -.03. Of greater value for indicating relative importance is the Semi-partial Correlation. The Semi-partial correlation, when squared, explains how much of the variance may be predicted from each independent variable: less than 1% in the case of the teacher variable, 3% in the case of the leader variable, and less than 1% in the case of the curriculum variable.

Table 11

Summary of Multiple Regression Analysis for Variables Predicting Student IEFA Achievement (N = 23)

Variable	B	β	*Semi-Partial Correlation*
Teacher	-.94	-.07	-.06
Leader	-2.41	-.21	-.18
Curriculum	-.49	-.03	-.03

Note: R=.26; R^2=.07; Adjusted R^2=.08; F(3, 19) = .466; p = .71

The multiple correlation coefficient, *R,* is .26 ($R^2 = .07$) and the adjusted R^2 is -.08, indicating that 8% of the variance in student achievement can be predicted the combination of teacher, leader, and curriculum variables. However, this finding lacks statistical significance as indicated by the significance value of p = .71. Thus, this model lacks predictive power.

Summary

A total of 23 fifth grade teachers, 64 second through fourth grade teachers, and 10 school leaders completed survey questionnaires. A total of 512 students completed the student IEFA assessment. Descriptive statistics formed the basis of the first analysis utilizing the above stated sample. Through a comparison of means, the fifth grade teachers were determined to be sufficiently similar to the second through fourth grade teachers, thus giving no indication that fifth grade teachers' responses, used later in simple and multiple regression analyses, would differ substantially from the teacher sample as a whole, thereby adding strength to those analyses. The overall student mean

was within one point (36.6) of the total means for fifth grade students (37.1) belonging to the classes of the fifth grade teachers including in this study.

Median scores of all teachers on items designed to measure frequency of behavior were compared to median scores of all leaders on the same items, to determine if teacher and leader experiences with IEFA implementation varied. In several cases, principals reported higher levels than teachers. The median for teacher yearly professional development participation and use of Native guest speakers was reported by teachers to be one time yearly, and by leaders to be two to three times yearly. Both groups reported that the school leader discusses the need for IEFA implementation two to three times yearly and that the school district offers IEFA professional development two to three times yearly. Principals and teachers disagreed slightly on how frequently their school offers IEFA professional development (one time yearly vs. two times yearly), though principals reported that they sent their teachers to IEFA conferences two to three times yearly.

Teachers and leaders reported needs that would assist teachers to better implement IEFA. The greatest percentage of both teachers and leaders (90-100%) agreed that opportunities for teachers and students to interact with Native people would enhance IEFA implementation. Over 80% of teachers agreed that district level professional development and attending IEFA conferences at which they could self-select sectionals of interest would be helpful. Approximately 70% of teachers agreed that school level IEFA and participation in intensive IEFA institutes would better enable them to implement IEFA. Further, 64.8% of teachers and 90% of leaders agreed on the need for state IEFA standards. With regard to resources, 69.2% of teachers and 90% of leaders felt

teachers could benefit from additional IEFA children's literature; 61.6% of teachers and 70% of leaders agreed that OPI should provide more resources to aid in IEFA implementation; and 57.2% of teachers and 70% of leaders agreed that school districts should provide more IEFA resources. Resources that have been used by the greatest number of teachers included those which had been in the schools the longest (T. Veltkamp, personal communication, May 27, 2009), DVDs distributed by OPI, and collections of lesson plans.

The groups that constituted the second analysis were 23 fifth grade teachers and their 424 students. Sample size was sufficient for the purposes of exploratory research (Garson, 2009). No serious deviations from the assumptions for multiple regression analysis were detected. The independent variables—teacher, leader, and curriculum—were input into a multiple regression analysis. Beta values, semipartial correlations, *R*-values and adjusted R^2 were examined and determined to be extremely low. Combined with the lack of statistical significance as indicated by high p values, this model was determined to lack predictive power—though the relationship between small sample size and lack of statistical significance may mask the existence of a predictive relationship.

Given these results, it appears that none of the teacher, leader, or curriculum variables are predictive of student knowledge of Indian Education for All content. Further discussion of this model will be discussed in the following chapter.

CHAPTER FIVE: DISCUSSION

Indian Education for All (IEFA), a state funded legislative mandate based on Montana constitutional law, has little research upon which to draw. The Indian Education division of the Montana Office of Public Instruction (OPI) has made significant strides towards implementing this mandate through the development of the Essential Understandings of Montana Indians, dissemination of print and video resources, development of curriculum materials, hosting conferences and providing professional development opportunities for teachers, providing grants to fund implementation projects. Despite these efforts, teacher, leader, and student experiences with IEFA implementation vary widely across the state.

Efficient and cost-effective IEFA implementation that supports student learning at high levels should be research-driven. Factors that most impact student achievement must be identified in this process. Instruments that measure student achievement have not been used systematically or on a large scale, nor has data been collected from large groups of teachers or administrators to determine their implementation needs and experiences. Certainly, no attempt has been made to develop a model that accounts for why students do or do not learn IEFA content.

This study represents such an attempt. Exploratory in nature, this study utilized a student assessment instrument developed by the researcher from an earlier assessment created by Ngai (Ngai & Allen, 2007), based on the Essential Understanding of Montana Indians and Montana State social studies standards, and reviewed by three Indian Education for All implementation specialists at the Montana Office of Public Instruction. Additionally, this study utilized researcher-developed teacher and leader survey

questionnaires, based on the review of the literature and the operationalized definitions of the variable measured and pilot tested. The purpose of this study was to explore the relationship between teacher, leadership, and curriculum variables, and student achievement in order to create a predictive model that will inform professional development and implementation efforts for IEFA.

The procedure for conducting this study involved two parts. The first required measuring the cumulative Indian Education for All knowledge of fifth grade students attending schools in Missoula County. Student scores were grouped by classroom teacher and school principal and averaged in order to determine mean achievement level by teacher and school. The second part involved collecting quantitative data from second through fifth grade teachers about teacher, leader, and curriculum variables potentially impacting student IEFA achievement. Teachers were divided into two groups—fifth grade and second through fourth grade—and descriptive statistics used to collate responses to questions measuring each variable. The third part of data analysis involved collecting quantitative data from elementary school principals about teacher, leader, and curriculum variables potentially impacting student IEFA achievement. Descriptive statistics were again used to collate responses to questions measuring each variable. Finally, teacher and leader responses were compared, and fifth grade teacher responses, along with student achievement scores, were utilized to explore which variable (teacher, leader, or curriculum) was most predictive of student achievement.

Population and Sample

All Missoula County elementary school principals, second through fifth grade teachers, and fifth grade students comprised the population for this study. It included 21

schools ranging in size from nine students to over 500 students. Of the approximately 991 fifth grade students in the county, data was collected from 522, of which 424 met the criteria for the experimental portion of the study. The population of elementary school principals numbered 23, and data was collected from nine principals and one school superintendent. The population of fifth grade teachers numbers approximately 45, and data was collected from 23. The population of second through fourth grade teachers numbered approximately 143, and data was collected from a total of 64.

Conclusions

The following section is a discussion of the results relevant to the research questions. For convenience, each research question is restated, followed by an explanation of each analysis performed.

Research Question

The overarching research question is:

1. Are teacher, leadership, or curriculum variables most predictive of student knowledge of Indian Education for All content?

Sub-questions:

A. Which teacher variables are most predictive of student knowledge of Indian Education for All content?

B. Which leadership variables are most predictive of student knowledge of Indian Education for All content?

C. Which curriculum variables are most predictive of student knowledge of Indian Education for All content?

Discussion of Descriptive Findings

Fifth grade student achievement in Indian Education for All, as measured by the instrument developed for the purposes of this study, averaged 36.6 points out of a possible score of 64 points for the entire sample of 512 students from which data was collected. This equates to a mean of 57% correct.

According to the demographic information, teachers and school principal-leaders have a great deal of experience in their positions—a mean of 17.7 years for teachers and 15.5 years for principals. Both groups are highly trained as evidenced by the average level of education attained (Master's degree for teachers, Master's degree plus 3 or more courses for school principals). However, these individuals have taken few Native American Studies courses, averaging 1.5 for teachers and 1.1 for school leaders. Twenty-two teachers and six leaders had never taken a Native American Studies course, and just six teachers and one leader had taken as many as four to eight such courses. Nor have teachers or principals completed substantial multicultural education coursework, averaging 1.4 for teachers and 0.9 for school principals. While 28 teachers and six principals had never taken a multicultural education course, just one teacher and leader had taken five to six courses in this area of study. While some teachers have attended as many as 74 hours of IEFA professional development training, others have not attended any, with an average of 18.1 hours for all teachers. No principal, on the other hand, had more than 30 hours of IEFA professional development training, with some having no training, for an average of 17 hours.

Frequency of IEFA professional development and use of Native guest speakers was low. Median scores on survey items showed that according to teachers, participation

in IEFA professional development, use of Native guest speakers, and school offerings of IEFA professional development occur just one time yearly, with school districts offering IEFA professional development two to three times yearly and principals discussing the need for IEFA implementation just two to three times yearly. Principals reported slightly greater frequencies of two to three times yearly on each measure.

Thirty-seven teachers reported attending IEFA professional development one or fewer times per year, with five attending four or more times yearly. School districts were more likely than individual schools to offer IEFA professional development opportunities regularly (49 teachers reported they did so two or more times yearly versus 36 reporting schools did so two or more times yearly). Nineteen teachers reported having never used Native guest speakers in the last three years, while seven did so four or more times in the same period. Ten teachers reported that their principal never discusses the need for IEFA implementation, and 27 reported this happens only one time yearly. Just 13 teachers reported this occurring four or more times yearly. Additionally, principals reported that they sent teachers to IEFA professional development conferences two to three times yearly. It is unclear whether two to three teachers (rather than each and every teacher) yearly attend such conferences, and if the same teachers attend regularly or if every teacher has an opportunity to attend.

Teachers and leaders answered questions concerning what would best assist the teachers with IEFA implementation. Over three-fourths of all teachers agreed or strongly agreed that district level professional development, school-level professional development, conference attendance, and participation in an intensive IEFA implementation institute would help with IEFA implementation. Most teachers and

principals (between 64.8% and 100%, depending on the measure) felt personal interaction with Native people, student interaction with Native people, development of state IEFA implementation standards, and acquisition of more IEFA children's literature would make IEFA implementation easier. Over half of each group (70% in the case of leaders) desired both OPI and the school district to provide more resources. Of 33 resources OPI has already sent to schools, just two were utilized by more than 26 teachers, or approximately one-fourth of the sample, while over half of the resources had been used by fewer than 10 teachers.

These findings suggest that few courses in Native American Studies or multicultural education were incorporated into teachers' and leaders' formal education. That being the case, and combined with the fact that on average teachers and leaders have been in their positions for much longer than IEFA has been implemented, it stands to reason that professional development is the logical way to fill in gaps in teachers' knowledge base. However, much more than the equivalent of two to three days of training are likely necessary as ongoing training and a continuous cycle of teaching and reflection are necessary for effective implementation (Glickman, Gordon, and Ross-Gordon, 2007; National Staff Development Council, 2001; (Snow-Renner & Lauer, 2005). Additionally, with professional development offerings relatively scarce, low participation in professional development activities that do occur, and lack of regular communication about the need for IEFA implementation by the school leader, it may take some time for teachers to acquire the additional training. As well, teachers and leaders feel strongly about their IEFA implementation needs. An increase in district level and school level professional development offerings, combined with opportunities to attend

IEFA conferences and institutes would likely be capitalized on as indicated by teachers' responses to survey items designed to gauge their IEFA implementation needs, thus increasing the number of hours of training teachers receive. Similarly, opportunities for interaction with Native people for both teachers and students must be made available, along with additional resources, including children's literature. However, the resources that exist in every school library are being used by, in the best case, one-quarter of the teachers, indicating a great need for teachers to spend more time exploring ways to use the resources that already exist.

Discussion of Regression Findings

Teacher, leader, and curriculum variables are all multifaceted, each consisting of several dimensions or subvariables. Teacher variables consist of the following elements: moral purpose of teaching, classroom curriculum design, professional development participation, and familiarity with available IEFA resources. Leader variables consist of the following elements: approaches change implementation according to change theory by establishing and communicating priorities, setting specific goals, fostering an environment of collegiality and professionalism, monitoring implementation, and providing effective professional development opportunities. Curriculum variables consist of a guaranteed and viable curriculum and access to Indian Education for All resources. Each of these subvariables was collapsed into its overarching, parent variable for the purposes of running a predictive statistical analysis.

Fifth grade student achievement in Indian Education for All, as measured by the instrument developed for the purposes of this study, average 37.1 points out of 62 possible for the sample of 424 on which predictive statistical tests were conducted. Mean

score by teacher served as the dependent variable for the purposes of this research. It seems plausible that one or more of the independent variables would correlate at some significant level with student IEFA achievement, as research suggests is the case with student achievement in other content areas. However, for the multiple regression run in order to measure the extent of any existing predictive relationship(s) between teacher, leader, and/or curriculum variables and student achievement, none of the independent variables was found to have statistically significant predictive power.

One can speculate as to the reason for these results. It may be that the size of the fifth grade teacher sample influenced the results, but the possibility that there is no relationship between the teacher, leader, and curriculum predictor variables and the outcome variable, student achievement, must also be considered. This, in itself, is a valuable finding which may influence the direction of future research. Additionally, each independent variable is composed of a number of subvariables. Were the sample size sufficient to permit such an analysis, it might be that specific subvariables predict a significant portion of the variance in the outcome variable.

Conversely, it may be that no predictors exist, or that predictors exist which were not explored within the framework of this study. Finally, though the predictor variables, as operationally defined in this study, may not have a predictive relationship with the outcome variable, this may be a product of the way the variable was defined. Reconceptualizing teacher, leader, and curriculum variables and designing appropriate questions by which to measure them may result in findings with predictive power.

Summary of Discussion

It appears that several informative tidbits were teased out of the descriptive portion of the study—namely, what teachers and leaders are experiencing concerning coursework and training applicable to IEFA implementation, IEFA professional development participation to date, and what teachers believe would help them (and leaders believe would help teachers) to better implement IEFA. Additionally, usage figures for resources paid for and provided by the Office of Public Instruction were collected for the first time. Finally, while no statistically significant prediction correlations were found, this is connected to the small sample size utilized in the analyses.

Strengths and Limitations

Below, the strengths and limitations of this research study are discussed in detail. Some relate to the design of the study while others result from the particular sample from which data was obtained. Results from this research must be pondered in relationship to the following discussion.

Strengths

1. The number of students participating in the study represented over half of the 991 individuals composing the fifth grade population in Missoula County, giving an accurate representation of student knowledge of IEFA implementation. The 512 student scores contributed to an overall mean achievement score of 36.6 points, equating to a confidence interval of 99% and a margin of error of just 3.96%. Thus, these results are generalizable to the population of fifth grade students attending public schools located within Missoula County.

2. The student assessment instrument was validated though a process of extensive review and modification in conjunction with three Indian Education specialists at the Office of Public Instruction as well as two rounds of pilot testing. This tool should prove useful in measuring student IEFA achievement in additional Montana schools.
3. Strong internal consistency exists between items on the teacher survey as demonstrated by the high value of Cronbach's alpha obtained for almost every subvariable and composite variable.
4. The assumptions for multiple regression analysis were adequately met.
5. The review of the literature was thorough, providing a comprehensive history of IEFA implementation and a strong theoretical basis for the need for Indian Education for All in Montana's schools.

Limitations

1. The sample was a convenience sample, and teachers and leaders participated voluntarily. Student assessment scores were collected on the basis of the willingness of the classroom teacher to participate in the study. Thus, the samples utilized for all analyses were not random and results might have been influenced by such factors as teacher and leader participants' personal interest in or feelings towards IEFA, or teachers with low implementation levels declining to participate in the study.
2. Fifth grade teacher sample size was quite low, possibly contributing to absence of significant predictive relationships between the outcome variable and the three predictor variables.

3. The fact that the teacher and leader instruments used in this study were self-report on a four point Likert scale introduces the possibility that that the information obtained is inaccurate or incomplete. For example, participants may not have understood questions or may not have had the choice of a sufficient number of levels from which to choose the most accurate response. Providing a greater range of choices for participants increases the possibilities for statistical analysis and can be condensed later if necessary (Pallant, 2007).
4. The fact that all instruments used in the study were researcher developed introduces the possibility that problems with instrumentation contributed to the lack of prediction findings.
5. Several questions, when examined post-completion, were determined to contain double negatives, confusing the participant and necessitating removal from the analysis.
6. Because of the extremely small size of the leader sample, no multiple regression analyses could be run with the data collected, limiting treatment of that data to descriptive analyses only.

Suggestions for Further Research

Further research is clearly necessary to determine factors that contribute to student achievement in IEFA. The following suggestions are only a few ideas for building the research base upon which this curriculum implementation is based:

1. Further adjustment and testing of the teacher and leader instruments used in this study are needed to improve upon the strength of the instruments and ensure that the questions actually measure what they are intended to measure.

2. Further analysis of the student assessment instrument is needed to determine which of the seven Essential Understandings students know the most about. Combined with research into exactly what IEFA content elementary school teachers are teaching, this information will guide further curriculum development and professional development efforts.
3. A mixed method study which begins with in-depth qualitative research within schools and classrooms where students are achieving at high levels as measured by the fifth grade assessment is needed in order to narrow down the factors which contribute to their success—this to be followed by quantitative research which measures which of the identified factors most contributes to student IEFA knowledge acquisition.
4. A study with sufficient sample size is needed that measures if and how large a predictive relationship exists between each of the teacher subvariables (commitment to the moral purpose of teaching, classroom curriculum design, professional development participation, and familiarity with available IEFA resources and student achievement).
5. A study with sufficient sample size is needed that measures if and how large of a predictive relationship exists between each leader subvariable (approaches change implementation according to change theory by establishing and communicating priorities, setting specific goals, fostering and environment of collegiality and professionalism, monitoring implementation, and providing effective professional development opportunities) and student achievement.

6. A study with sufficient sample size is needed to measure if and how large a predictive relationship exists between each curriculum subvariable (guaranteed and viable curriculum and access to Indian Education for All resources) and student achievement.
7. A study of school leaders, to include superintendents and principals, is needed to determine if leadership philosophies and practices impact IEFA implementation as measured by student achievement.
8. Exploration and comparison of student IEFA achievement in rural versus urban schools and reservation versus non-reservation schools is needed.

Final Conclusions and Implications for the Study

This study, though firmly situated within multicultural education, teacher effectiveness, leadership, and curriculum implementation theories and research base, endeavored to examine too many predictor variables for the size of the available sample. The limitations for data analysis resulting from small sample size were unfortunate, making it impossible to carry out the intended leader multiple regression analysis and possibly impacting the results of the teacher predictive model. Despite the fact that sophisticated quantitative methodology failed to yield much in the way of predictive information, this is the appropriate place to make some observations.

While the results of this research lacked statistical significance, it is true that this exploratory research study advanced the development of a student IEFA assessment tool in particular, and to a lesser extent, teacher and leader IEFA survey instruments. The student assessment underwent extensive review by knowledgeable Montana State Office of Public Instruction Indian Education For All Specialists as well as selective pilot

testing. The instrument was used with 512 fifth grade students, and for the first time yielded information on what students know about IEFA content. The, on average, poor performance of students on this assessment tool serves to inform interested individuals of the fact that while IEFA implementation is progressing, in no way is the process completed. Teachers need to teach the content required by the Essential Understandings and ensure that students learn the material. In particular, based on a cursory examination of the students' completed assessments, relatively easy to teach content, such as the tribes which live in Montana and the location and names of Montana's reservations proved difficult for students. They frequently left these questions blank or identified the wrong reservations and tribes as living in the state. This basic, fact-based content is part of the Montana social studies standards and as such should already be embedded into instructional practices. Either students are not being taught the content, or they are not retaining the information, in which case instructional methodologies must be reexamined. OPI might use this finding as a starting place for developing appropriate professional development for teachers and multiple and varied lesson plans for teaching this content.

The teacher and leader survey instruments developed for the purpose of this research proved lengthy and, for the measurement of certain subvariables, redundant as indicated by extremely high reliability as measured by a Cronbach's alpha above 0.9. Several ways in which the instruments might be adjusted emerged from this research. Dividing each instrument into three different instruments each measuring one predictor variable and its subvariables would permit the running of multiple regression statistics with the smaller samples available in a small state like Montana. Minimizing the number of questions on each survey by eliminating redundant and confusing items along with

those with skewed distributions, and increasing the number of possible responses available to participants, would ensure more accurate self-reporting by respondents.

Impressionistically, it seems that time to explore resources and teach multiple and diverse content areas limits teachers' ability to focus on IEFA implementation. IEFA curriculum content is untested, and teachers understandably expend more energy on the content areas for which they are held accountable by standardized testing requirements. Should IEFA content be incorporated into standardized testing (which would require the development of very clear IEFA standards and benchmarks by grade level), teachers would likely spend more time incorporating such content into the curriculum.

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APPENDIX A

TEACHER AND LEADER SURVEYS AND STUDENT ASSESSMENT

Dear Teachers:

Thank you for participating in this study. While lengthy, please do your best to answer all questions to the best of your ability and as accurately as possible. Do not skip any questions, as each one provides information important to this research.

Please note that the abbreviation "IEFA" stands for Indian Education for All.

Please note that "n/a" stands for not applicable. Try not to leave any answers blank.

Remember, **all** information is **confidential**, and **at no time** will your answers be traceable directly to you.

Please begin by answering the demographic questions below. Though questions of age may seem indelicate, understand that the information collected below is **vitally important** for the statistical analysis of survey results.

Demographics

Number of University **classes** taken in Native American Studies:
Number of University **classes** taken in Multicultural Education:
Years of teaching experiences:
Years in your current position:
Years at your current school:
Years teaching in Montana:
Number of professional development (PIR) **hours** earned which focus on IEFA:
Age as of February 28, 2009
Gender:
Circle your level of education: Bachelor's degree Bachelor's degree + 3 or more courses Master's degree Master's degree + 3 or more courses Doctorate

IA5. I am committed to the common good—to the welfare of all community members.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA1. My principal provides conceptual guidance (theory-based practices and assistance with implementation) for teachers in my school regarding effective classroom practices.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB6. I adapt my teaching strategies to meet the individual needs of my students.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA9. I have enough time to teach most of my grade level's health and P.E. curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA22. I am inspired to implement Indian Education for All curriculum changes.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB1. In my school, teachers have the resources needed to maintain a high standard of teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB2. Before teaching a lesson, I communicate student learning goals to my class.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID2. In my school, we systematically have discussions about current research and theory.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA1. I teach students to look at current events from multicultural perspectives.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID4. I regularly share ideas about **IEFA** implementation with my colleagues.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB4. I use a variety of instructional strategies—such as films, lectures, readings, and demonstrations— to teach a new **IEFA** concept.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB7. Opportunities to interact with Native people would make it easier to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA15. As a teacher, my job is to help students become critical thinkers.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA4. Lack of administrative support from my school district makes it difficult for me to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB18. I know enough about the *culture* of Montana Indians to integrate it into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB5. In my school, the materials and resources teachers need to successfully instruct students in required **IEFA** content are procured and delivered in a timely fashion.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB14. I integrate **IEFA** into my technology curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC2. In my school, the principal is directly involved in helping teachers design **IEFA** curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID4. I regularly use the OPI website to access electronic **IEFA** resources.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA11. I understand the intent of the Indian Education for All Act.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA13. As a teacher, it is my job to help eliminate social oppression—racism, classism, & sexism.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID7. My principal is optimistic.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID5. During the last three school years, how often (as a yearly average) have you utilized Native guest speakers in your classroom or at a school function (for example, field trips, assemblies)

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IIIA7. I have enough time to teach most of my grade level's fine arts curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB15. I need more lesson plans, units, and ideas to help me implement **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB19. I know enough about the *diversity* of Montana Indians to integrate it into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF6. Frequency with which your ***school district*** offers professional development focusing on **IEFA** implementation:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IB23. When I teach **IEFA** content, I transform the structure of my curriculum so that students view concepts, issues, events, and themes from multiple perspectives.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA7. My principal ensures that teachers in my school understand the theoretical basis for **IEFA**—why it is important—beyond the fact that it is a legal requirement.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA7. I have a personal vision which shapes the difference I am trying to make.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA1. I don't think this is the right time to implement a mandate like **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA16. I critically examine how my own worldview & cultural assumptions influence teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF10. District-level professional development would make it easier to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB7. I make sure that the sequence of my **IEFA** instruction is logical.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB14. A high-status Native person might have the right to speak for his/her tribe as a whole.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA14. I lack confidence in my ability to implement large educational changes.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB1. In my school, concrete goals for student achievement have been established.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID10. I use the **IEFA** resources in my building often.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID5. In my school, my principal expects teachers to work together on grade-level teams.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA13. Lack of background knowledge makes it difficult for me to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA9. I work to make change happen.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB10. I need the Office of Public Instruction to provide more **IEFA** resources.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB8. I make sure to pace my **IEFA** instruction to best support student knowledge acquisition.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF14. Most **IEFA** training I've taken was a personal choice, not school or district requirements.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB3. I feel comfortable determining what **IEFA** content my students should master.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA5. I have enough time to teach most of my grade level's language arts curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA20. I make sure that I comply with the **IEFA** mandate.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID14. I believe I can make positive changes in my school (not just in my own classroom).

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID7. I'm familiar with children's literature about Montana Indians available in my school library.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA10. My principal has confidence in my professional abilities.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA4. As a teacher, it is my job to help students develop a successful life in society.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB13. An American Indian person only has the right to speak from his/her own life experiences. He/she does not have the right to speak for the tribe as a whole.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF1. In my school, teachers have the necessary professional development opportunities to maintain a high standard of teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB13. I integrate **IEFA** into my fine arts curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA12. Lack of time to learn new content makes it difficult for me to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC7. After attending **IEFA** professional development, I have had the opportunity to put into practice what I learned.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB5. In my school, we have specific goals for specific **IEFA** instructional activities.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB4. In my school, the materials and resources teachers need to successfully instruct students in required content are procured and delivered in a timely fashion.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA32. I teach students to look at historical events from multicultural perspectives.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF2. In my school, teachers have the necessary professional development opportunities to successfully implement Indian Education for All.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB6. Lack of access to resources makes it difficult to integrate **IEFA** into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA8. I am a life-long learner.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB9. I need my school district to provide more resources for **IEFA** implementation.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA26. It is important for my students to learn about the diversity of Montana Indian peoples.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID15. I am confident in my pedagogical knowledge—that is, I have much knowledge of instructional techniques for use in many content areas and with diverse students.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID2. Did you know OPI sent a number of **IEFA** resources to each Montana school library?

Yes No

IIF3. At my school, we've progress implementing **IEFA**, but we need further professional development to keep us moving forward.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID1. In my school, we review Indian Education for All curriculum resources.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA3. I have enough time to teach most of my grade level's social studies curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF5. My principal regularly involves teachers in **IEFA** professional development activities that directly enhance their teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID6. Lack of familiarity with resources in my building makes it difficult for me to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA9. I feel comfortable discussing my ideas with my principal.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB24. I teach and encourage my students to take action to solve problems in our society.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA17. There are clear guidelines about what **IEFA** content I must teach my students.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA3. As a teacher, it is my job to help shape society into a place where people get along together.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB7. Our school-wide **IEFA** implementation goals are prominent in our school day-to-day.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB20. I currently teach about Montana Indians.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF12. Participating in an intensive **IEFA** institute specifically focused on implementing **IEFA** would make it easier to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB9. I integrate **IEFA** into my social studies curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA14. Lack of time to plan **IEFA** lessons makes it difficult for me to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF13. The **IEFA** training I have received has mostly been “one-shot training,” not part of my school’s or district’s long-term professional growth plan.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB3. In my school, we have made progress implementing **IEFA**, but we need additional resources to keep us moving forward.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID13. My colleagues and I share our successes with one another.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB15. I integrate **IEFA** into my language arts curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA3. Lack of administrative support from my school principal makes it difficult for me to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB10. I integrate **IEFA** into my science curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID6. I feel that I have a say in the decision-making process within my school

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB12. Any Indian person is capable of teaching about his/her tribe.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF11. Attending **IEFA** conferences where I can select sectionals which interest me would make it easier to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB12. I integrate **IEFA** into my health and physical education curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF7. Frequency with which your ***school*** offers professional development focusing on **IEFA** implementation:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IA25. It is important for my students to learn about the cultures of Montana Indian peoples.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE4. My principal regularly gathers information on what **IEFA** content I am teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA10. I have enough time to teach Indian Education for All.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF9. School-level professional development would make it easier to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA18. I know exactly what **IEFA** content is essential for my students to learn.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC6. My principal discusses the need for **IEFA** implementation:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IC9. The **IEFA** training I have received focused on specific content.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC1. In my school, we systematically consider ways to implement **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC1. I participate in **IEFA** professional development activities:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IIA6. My principal ensures that teachers in my school understand the theoretic basis of the changes we are implementing.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA30. I introduce students to many different points of view.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA16. If state standards for **IEFA** existed (as currently exist, for example, for math & science, etc.) it would be easier for me to teach **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB2. In my school, concrete goals for student achievement in **IEFA** have been established.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB8. I need more children's literature about Montana Indians to effectively integrate **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA11. As a teacher, it is my job to help bring about social change.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB6. Our school-wide goals are a prominent part of our day-to-day lives.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB17. I know enough about the *sovereignty* of Montana Indians to integrate it into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA2. In my school, the instruction time of teachers is protected from unnecessary interruptions.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB1. When teaching **IEFA**, I identify what students need to know, set student learning goals, and design my instructional activities to meet those goals.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID8. My principal is honest.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA17. I work to implement curriculum changes—even difficult ones.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC4. My principal continually exposes teachers in my school to ideas about how to effectively implement **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA27. It is important for my students to learn about the history of Montana Indian peoples.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA8. My principal asks teachers in my school for input on key decisions.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA2. As a teacher, it is my job to strive for equal opportunities for my students.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID12. I feel comfortable sharing my mistakes and challenges with my colleagues.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC8. After attending **IEFA** professional development, I have had the opportunity to put into practice what I learned.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC10. After attending **IEFA** professional development, I have had the opportunity to put into practice what I learned **and** then reflect on the effectiveness of my teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF8. Lack of professional development opportunities makes it difficult for me to integrate Native content into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA23. In my classroom, I continually assess the effectiveness of my **IEFA** curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA6. I have enough time to teach most of my grade level's mathematics curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA19. I don't feel confident in my ability to successfully implement **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE1. My principal continually monitors the effectiveness of the instructional practices used in our school.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC4. I have been able to choose what **IEFA** professional development I participated in.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF4. My principal regularly involves teachers in professional development activities that directly enhance their teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB11. I wish my students had the chance to learn directly from knowledgeable Native people.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC2. I participate in **IEFA** professional development activities that directly enhance my teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA8. I have enough time to teach most of my grade level's technology curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA6. As a teacher, it is my job to instill in my students democratic values.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB4. In my school, we have specific goals for specific instructional activities.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC3. Most **IEFA** professional development I have taken has been relevant and stimulating.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE2. My principal continually monitors the effectiveness of the **IEFA** instructional practices used in our school.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB21. When I teach **IEFA** content, I focus on well-known individuals, celebrations, or specific cultural practices, such as powwows or beading.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC5. My principal clearly communicates to teachers our school's **IEFA** implementation plan.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA28. It is important for my students to learn about the sovereignty of Montana Indian peoples.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB2. In my school, teachers have the necessary resources to successfully implement **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB5. I expose students to new **IEFA** content multiple times to ensure they learn the content.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID3. In my school, we systematically read articles and books about effective practices.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC6. The **IEFA** professional development I have received has been an integral part of my school's or district's long-term professional growth plan.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC3. My principal is directly involved in helping teachers address **IEFA** instructional issues in their classrooms.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB11. I integrate **IEFA** into my mathematics curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB3. In my school, we have designed concrete **IEFA** curricular objectives.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA21. Learning more about Montana Indians is a priority in my professional life.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA4. I have enough time to teach most of my grade level's science curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC5. The **IEFA** professional development I have received is directly related to the curriculum I teach.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID10. My colleagues are supportive and respectful of one another.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID9. I know about many of the **IEFA** resources in my school, but I haven't spent much time examining them.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA5. My principal motivates me to be the best teacher I can be.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA31. It is important to introduce students to many different cultures.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID1. My principal encourages teachers to share ideas about **IEFA** implementation.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB16. I know enough about the *history* of Montana Indians to integrate it into my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID9. My principal is considerate.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID8. I am familiar with **IEFA** resources provided by my school district.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA2. My principal provides conceptual guidance for teachers in my school regarding effective **IEFA** classroom practices.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IB22. When I teach **IEFA**, I add content, themes, and perspectives to my curriculum, but don't actually change the focus of my curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA11. I know my principal supports me.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA10. I seek to master the requirements of my job.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE3. My principal is directly involved in helping teachers address **IEFA** assessment issues in their classrooms.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA24. I am comfortable making major changes in curriculum and instruction that lead to **IEFA** implementation.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA15. I am familiar with the **IEFA** benchmarks that have been integrated into state social studies standards.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IA29. I am committed to implementing Indian Education for All

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID3. Put a check mark next to each of the OPI resources you have used (see attached list of resources sent to schools available on the OPI website.)

Non-OPI Publications Sent to All School Libraries (goes with question ID3)

American Indian Contributions to the World: five volumes. by Emory Dean Keoke and Kay Marie Porterfield, Facts on File, Inc., 2005.

American Indian Music: More Than Just Flutes and Drums A Guide to American Indian Music, Office of Public Instruction, 2008

Arlee Public Schools K-12 Literature Units, Office of Public Instruction, 2008

Assiniboine Chief Rosebud Remembers Lewis and Clark (DVD), Valley County Historical Society, 2004.

A Broken Flute: The Native Experience in Books for Children, edited by Doris Seale and Beverly Slapin, AltaMira Press and Oyate, 2005.

Challenge to Survive History of the Salish Tribes of the Flathead Indian Reservation
Unit I Pre-1800 From Time Immemorial: Traditional Life
Unit II 1800-1840 Three Eagles and Grizzly Bear Looking Up Period
Unit III 1840-1870 Victor and Alexander Period
The Lower Flathead River Flathead Indian Reservation

Connecting Cultures and Classrooms: K-12 Curriculum Guide for Language Arts, Science, and Social Studies, developed by Sandra J. Fox, Office of Public Instruction, 2006

Coyote Stories of the Montana Salish Indians, developed by the Salish Culture Committee, copublished with Salish Kootenai College Press, 1999.

Directory of Indian Education Programs in Montana, Office of Public Instruction, 2008

Encyclopedia of American Indian Contributions to the World: 15,000 Years of Inventions and Innovations, edited by Emory Dean Keoke and Kay Marie Porterfield, Facts on File, Inc., 2003.

Fire on the Land/Beaver Steals Fire, (DVD) Confederated Salish and Kootenai Tribes, 2005

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APPENDIX B

LEADER QUESTIONAIRE

Leader Questionnaire

Dear Principals:

Thank you for participating in this study. While lengthy, please do your best to answer all questions to the best of your ability and as accurately as possible. Do not skip any questions, as each one provides information important to this research.

Please note that the abbreviation "IEFA" stands for Indian Education for All.

Please note that "n/a" stands for not applicable. Try not to leave any answers blank.

Remember, **all** information is **confidential**, and **at no time** will your answers be traceable directly to you.

Please begin by answering the demographic questions below. Though questions of age may seem indelicate, understand that the information collected below is **vitally important** for the statistical analysis of survey results.

Demographics

Number of University **classes** taken in Native American Studies:
Number of University **classes** taken in Multicultural Education:
Years of experience as a principal:
Years in your current position:
Years at your current school:
Years as a principal in Montana:
Number of professional development (PIR) **hours** earned which focus on **IEFA**:
Age on February 28, 2009:
Gender:
Circle your level of education: Bachelor's degree Bachelor's degree + 3 or more courses Master's degree Master's degree + 3 or more courses Doctorate

IIC7. I am directly involved in helping teachers design curricular activities for their classes.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID2. Did you know that OPI sent a number of **IEFA** resources to each Montana school library?

Yes No

IIA11. I support the teachers in my school.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA13. Lack of background knowledge makes it difficult for teachers in my school to integrate Native content into their curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID3. In my school, we systematically read articles and books about effective practices.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB4. In my school, we have specific goals for specific instructional activities.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC4. Teachers in my school are able to choose the **IEFA** professional development in which they participate.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID8. Teachers are familiar with **IEFA** resources provided by the school district.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID1. I encourage teachers to share ideas about **IEFA** implementation.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA10. In my school, teachers have enough time to teach Indian Education for All.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA9. Teachers feel comfortable discussing ideas with me.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID13. Teachers share their successes with one another.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC5. The **IEFA** professional development teachers in my school receive is directly related to the curriculum they teach.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE2. I continually monitor the effectiveness of the **IEFA** instructional practices used in our school.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB7. Our school-wide **IEFA** implementation goals prominent in school day-to-day.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB12. Any Indian person is capable of teaching about his/her tribe.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID14. I believe I can make positive changes in my school.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC1. Teachers in my school participate in **IEFA** professional development activities that directly enhance their teaching:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IIC9. I make sure that my school complies with the **IEFA** mandate.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA12. I work to inspire the teachers in my school to implement curriculum changes—even those which might seem beyond their grasp.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA4. In my school, teachers have enough time to teach most of their grade level's science curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA6. I ensure that teachers in my school understand the theoretic basis of the changes we are implementing.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE5. I continually monitor the effectiveness of our **IEFA** curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID10. Teachers use the **IEFA** resources in my building often.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB3. In my school, we have designed concrete **IEFA** curricular objectives.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB1. In my school, teachers have the necessary resources to maintain a high standard of teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF13. The **IEFA** training I have provided to the teachers at my school has mostly been "one-shot training," not part of my school's or district's long-term professional growth plan.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC6. The **IEFA** professional development my teachers receive is an integral part of my school's or district's long-term professional growth plan.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA1. I provide conceptual guidance for the teachers in my school regarding effective classroom practices.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB5. In my school, the materials and resources teachers need to successfully instruct students in required **IEFA** content are procured and delivered in a timely fashion.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA8. I ask teachers in my school for input on key decisions.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE4. I regularly gather information on what **IEFA** content teachers are teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID6. Lack of familiarity with resources in my building makes it difficult for teachers to integrate Native content into their curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA13. I am comfortable making major changes in curriculum and instruction that lead to **IEFA** implementation.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC4. I continually expose teachers in my school to ideas about how to effectively implement **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID1. In my school, we review Indian Education for All curriculum resources.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF15. I have sent teachers to **IEFA** conferences or institutes:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IIIA12. Lack of time to learn new content makes it difficult for teachers in my school to integrate Native content into their curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC6. I discuss the need for **IEFA** implementation:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

ID7. Teachers are familiar with the children's literature about Montana Indians available in the school library.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB2. In my school, concrete goals for student achievement in **IEFA** have been established.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID10. The teachers in my school are supportive and respectful of one another.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB7. Opportunities to interact with Native people would make it easier for the teachers at my school to integrate Native content into their curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID4. I encourage teachers to share ideas with their colleagues about **IEFA** implementation.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IC9. In my school, the **IEFA** training teachers receive focuses on specific content.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID9. The teachers in my school generally consider me to be considerate.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA2. I provide conceptual guidance for the teachers in my school regarding effective **IEFA** classroom practices.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA16. If state standards for **IEFA** existed (as currently exists, for example, for math, science, etc.) it would be easier for me to teach **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC3. I am directly involved in helping teachers address **IEFA** instructional issues in their classrooms.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID9. Teachers know about the **IEFA** resources in my school, but haven't spent time examining them.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC5. I clearly communicate to staff our school's **IEFA** implementation plan.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB9. We need the school district to provide more resources for **IEFA** implementation.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB5. In my school, we have specific goals for specific **IEFA** instructional activities.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA9. In my school, teachers have enough time to teach most of their grade level's health and P.E. curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB1. In my school, concrete goals for student achievement have been established.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF7. Frequency with which your ***school*** offers professional development focusing on **IEFA** implementation:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IIIB11. I wish the students in my school had the chance to learn directly from knowledgeable Native people.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC2. I am directly involved in helping teachers design **IEFA** curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA7. I ensure that teachers in my school understand the theoretical basis for **IEFA**—why it is important—beyond the fact that it is a legal requirement.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB2. In my school, teachers have the necessary resources to successfully implement **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC1. In my school, we systematically consider ways to implement **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA18. Teachers at my school know exactly what **IEFA** content is essential for their students to learn.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF4. I regularly involve teachers in professional development activities that directly enhance their teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB13. An American Indian person only has the right to speak from his/her own life experiences. He/she does not have the right to speak for the tribe as a whole.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID2. In my school, we systematically have discussions about current research and theory.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA17 There are clear guidelines about what **IEFA** content teacher at my school must teach their students.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID7. The teachers in my school generally consider me to be optimistic.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB3. We have made good progress, but we need additional resources to keep us moving forward on our **IEFA** implementation efforts.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA10. I have confidence in the professional abilities of the teachers in my school.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB10. We need the Office of Public Instruction to provide more **IEFA** resources.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID6. I allow teachers to share the decision-making process within my school

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA8. In my school, teachers have enough time to teach most of their grade level's technology curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE1. I continually monitor the effectiveness of the instructional practices used in our school.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA2. In my school, the instruction time of teachers is protected from unnecessary interruptions.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF5. I regularly involve teachers in **IEFA** professional development activities that directly enhance their teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB4. In my school, the materials and resources teachers need to successfully instruct students in required content are procured and delivered in a timely fashion.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF1. In my school, teachers have the necessary professional development opportunities to maintain a high standard of teaching.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA14. Lack of time to plan **IEFA** lessons makes it difficult for teachers in my school to integrate Native content into their curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID12. Teachers feel comfortable sharing their mistakes and challenges with one another.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA11. I understand the intent of the Indian Education for All Act.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF6. Frequency with which your ***school district*** offers professional development focusing on **IEFA** implementation:

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

IIIA6. In my school, teachers have enough time to teach most of their grade level's mathematics curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID5. I expect teachers to work together on grade-level teams.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA5. In my school, teachers have enough time to teach most of their grade level's language arts curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB8. The teachers in my school need more children's literature about Montana Indians to effectively integrate **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIE3. I am directly involved in helping teachers address **IEFA** assessment issues in their classrooms.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB14. A high-status Native person might have the right to speak for his/her tribe as a whole.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIC8. I work to inspire my teachers to implement Indian Education for All changes.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA3. In my school, teachers have enough time to teach most of their grade level's social studies curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF2. In my school, teachers have the necessary professional development opportunities to successfully implement Indian Education for All.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIB6. Lack of access to resources makes it difficult for the teachers in my school to integrate **IEFA** into their curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIB6. Our school-wide goals are a prominent part of our day-to-day lives.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA1. I don't think this is the right time to implement a mandate like **IEFA**.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIF3. We have made good progress, but we need additional professional development to keep us moving forward on our **IEFA** implementation efforts.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA15. I am familiar with the **IEFA** benchmarks that have been integrated in to the state social studies standards.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IID8. The teachers in my school generally consider me to be honest.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIIA7. In my school, teachers have enough time to teach most of their grade level's fine arts curriculum.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

IIA5. I motivate each of my teachers to be the best teacher he or she can be.

0	1	2	3	4
n/a	strongly disagree	disagree	agree	strongly agree

ID5. During the last three school years, how often (as a yearly average) have your teachers utilized Native guest speakers in their classroom or at a school function (for example, field trips, assemblies)?

Never	1 time yearly	2-3 times yearly	4-5 times yearly	6 + times yearly

APPENDIX C

STUDENT ASSESSMENT

Indian Education Assessment for Grade 5

1. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ There are no more Indian tribes.
   - ☐ There are many Indian tribes still in existence today.

2. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ Each American Indian tribe has a culture of its own.
   - ☐ All American Indian tribes have the same culture.

3. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ There is only one American Indian language.
   - ☐ There are many American Indian languages.

4. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ Today, some American Indians speak their tribal language.
   - ☐ Today, all American Indians only speak English.

5. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ All tribes have the same kind of government.
   - ☐ Tribes have different kinds of government.

6. Circle the names of all the American Indian tribes that have a land base (reservation) in Montana.

Salish	Cherokee	Crow	Pend d'Oreille	Shoshone
Kootenai	Gros Ventre	Cree	Blackfeet	Yupik
Mohawk	Arawak	Zuni	Ute	Chippewa
Assiniboine	Sioux	Navajo	Northern Cheyenne	

7. One of these tribes does not have a reservation. Put an X in the box by the name of that tribe.
   - ☐ The Little Shell Band of the Chippewa tribe.
   - ☐ The Crow tribe.
   - ☐ The Sioux tribe.

8. Choose one sentence that you think is true. Put an X in the box beside it
   - ☐ All American Indians live on reservations.
   - ☐ Some American Indian people live on reservations, but others live in towns and cities outside of reservations.

9. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ All American Indian people are the same.
   - ☐ American Indian people are different from each other.

10. Does each tribe have its own history? Circle one.
Yes No

11. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ All people with Indian blood are tribal members.
   - ☐ Every tribe determines who is a member of that tribe in a different way.

12. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ All Indian people have dark hair and skin.
   - ☐ Some Indian people have light hair and skin.

13. Choose one sentence that you think is true. Put an X in the box beside it.
   - ☐ American Indians still practice their traditions and language today.
   - ☐ No American Indians still practice their traditions and language.

14. U.S. government policies (laws and rules) have affected Indian people and still shape who they are today. What happened during each of these periods in history? **Match** the name of the U.S. government policy period **by drawing a line** to the statement that explains what happened during that time.

Allotment Period	English settlers came to the Americas. Many American Indians died from European diseases. American Indians were forced off their land by the settlers.
Self-Determination Period	The reservations were divided up into sections. Each tribal member got a piece of land to ranch or farm. This was to make American Indians more like other Americans.
Termination Period	Many tribes were broken up during this time. The U. S. government no longer considered tribes independent nations. Treaty responsibilities were ignored.
Colonization Period	Tribes have more control over their own decision making. Tribal leaders are able to shape the future of their tribe, free from control by the U.S. government.

15. Choose one sentence that you think is true. Put an X in the box beside it.
    - ☐ Some Native American stories can only be told at certain times of year.
    - ☐ All Native American stories can be told at any time of year.

16. An **oral history** is a history that is passed down through spoken words, from one person to another over time. Which sentence is true?
    - ☐ Oral history cannot be as accurate or trustworthy as written history for getting information.
    - ☐ Both oral **and** written history can be accurate or trustworthy for getting information.

17. Choose one sentence that you think is true. Put an X in the box beside it.
    - ☐ All American Indians practice the same religion.
    - ☐ American Indian people practice a variety of different religions.

18. What is the name of the nearest reservation to Missoula? _____

19. Which tribe or tribes live there? _____

20. American Indian tribes are <u>still</u> **sovereign** nations. This means they make their own decisions about how to govern themselves.
    - ☐ This is true.
    - ☐ This is not true.

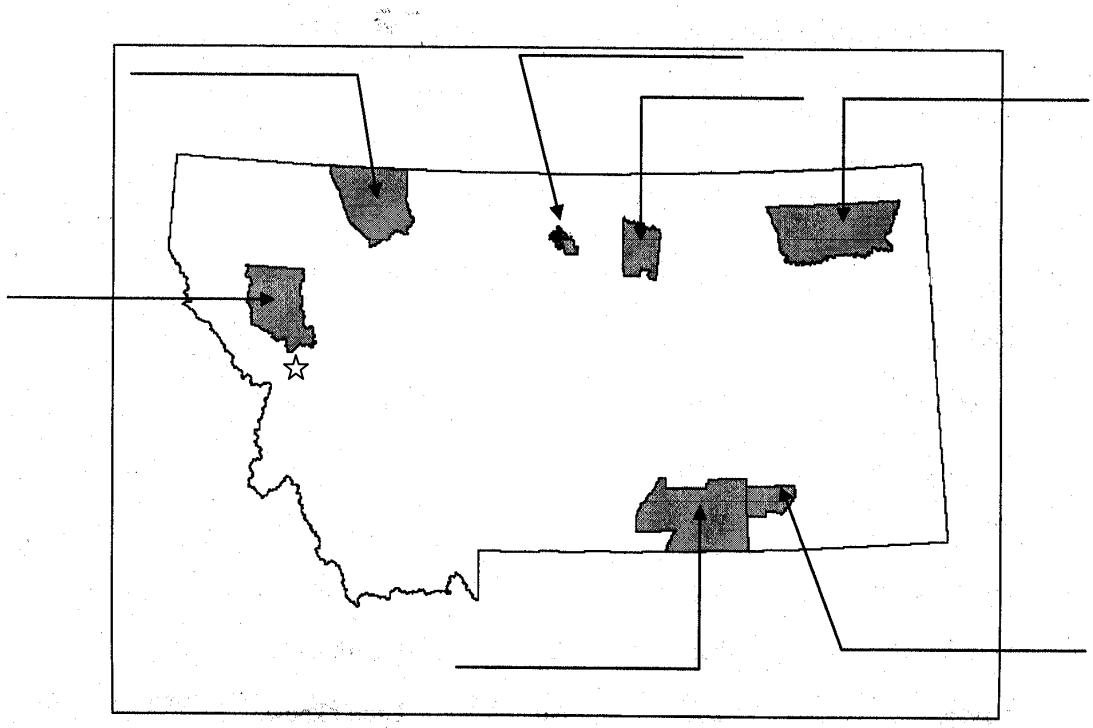
21. **Sovereignty** is what made it possible for the American government to make treaties with tribes.
    - ☐ This is true.
    - ☐ This is not true.

22. Choose one sentence that you think is true. Put an X in the box beside it.
    - ☐ A reservation is land that has been reserved by tribes for their use through treaties.
    - ☐ A reservation is land that is given to American Indians by the U.S. government.

23. Circle the names of each reservation that is located in Montana.

Flathead	Navajo	Fort Belknap	Blackfeet
Fort Peck	Pine Ridge	Rocky Boy's	Northern Cheyenne
Zuni	Crow	Rosebud	Wind River

24. Each arrow is pointing at a reservation in Montana (a piece of darkened area on the map. If you know the name of a reservation, write the name on the line next to the reservation.



25. Do Indian tribes have their own governments, separate from the State and Federal governments?
    - ☐ Yes
    - ☐ No

26. Choose one sentence that you think is true. Put an X in the box beside it.
    - ☐ Before the Montana Constitution in 1889, tribes had **less** land than they do now.
    - ☐ Before the Montana Constitution in 1889, tribes had **more** land than they do now.

27. All Americans have the same point of view about events that happened during U. S. history.
    - ☐ This is true.
    - ☐ This is not true.

28. Choose one sentence that you think is true. Put an X in the box beside it.
    - ☐ The amount of power a tribe has to govern itself is different depending on the tribe.
    - ☐ All tribes have the exact same governing powers.

29. If a book says something about American Indians, it is definitely true.
    - ☐ This is true.
    - ☐ This is not true.

30. All Americans had the same **experiences** in the history of the United States.
    - ☐ This is true.
    - ☐ This is not true.

31. History is a story. Would everyone tell the American story the same way or different ways?
    - ☐ The American story is always told **the same way**
    - ☐ The American story is sometimes told **in different ways.**

32. Part of learning about history is learning about the experiences of different people.
    - ☐ This is true.
    - ☐ This is not true

33. U.S. government **policies** (laws and rules) have affected Indian people and still shape who they are today. What happened during each of these periods in history? **Match** the name of the U.S. government policy period **by drawing a line** to the statement that explains what happened during that time.

Tribal Reorganization Period	Children were taken from their homes, often by force. They were sent to live-in schools and taught skills such as English and farming.
Treaty Period	Congress changed how it treated American Indians. Allotment ended. Tribes wrote their own constitutions to organize their own governments. The constitutions said how the tribe would be governed and who would be a member of the tribe.
Boarding School Period	Tribes lost control of much of their original homeland because settlers wanted to live on the land. In return, the U.S. government promised to give the tribes educational services, medical care, and technical and agricultural training.

APPENDIX D

LETTERS TO PARTICIPANTS

Title: Teacher, Leadership, and Curriculum Variables which Contribute to Student Understanding of Indian Education for All Content.
SPONSOR: Montana Office of Public Instruction
PROJECT DIRECTOR:
Erin Lipkind
1581 Cornerstone Drive
Missoula, MT 59802
Phone: (406) 207-5429 (home) (406) 728-2400 X4381 (work)
Email: erin.lipkind@umontana.edu (home) erlipkind@mcps.k12.mt.us (work)

Dear Superintendent:

I am a doctoral student at the University of Montana, writing for permission to conduct a research study within your school district. I wish to study the curriculum, teacher, and leadership variables which contribute to student understanding of Indian Education for All (IEFA) content. Your district has been chosen because it is located in Missoula County. The purpose of this study is to learn how the Montana Office of Public Instruction (OPI) can best assist Montana teachers and school leaders to implement IEFA.

The study consists of two parts. First, teachers of grades 2-5 and elementary school principals will be asked to complete a survey which will provide insight into the curriculum, teacher, and leadership variables which impact student understanding of the history, culture, diversity, and sovereignty of Montana's Indian people. Second, fifth grade teachers who elect to participate in the study will be asked to assess student IEFA knowledge utilizing an assessment developed by this researcher and based on the Essential Understandings of Montana Indians and the Montana social studies standards. The completed assessments will be used by the researcher to develop an understanding of the **cumulative** knowledge students have acquired over their K-5 education.

Your district's participation in this study is **voluntary**. However, if you agree to take part in this research study you will be assisting the state in determining the best use of Indian Education funding to meet teacher, leadership, and student needs. While district level results will be available to OPI and school superintendents upon request, individual responses will be **confidential.** At no time will a teacher's, principal's or student's answers be traceable directly to that individual. The intention is to get an overall picture of Missoula County's implementation of the IEFA mandate to date. The completed study will be available for your perusal approximately June 2009.

Participation in the study will require teachers and school principals to complete a survey questionnaire, which will take about twenty minutes to complete. Students will complete an assessment, which should take about thirty minutes, between February 20 and March 20, 2009. Again, **all information will be confidential.** I will be contacting you via telephone within the next week to discuss your desire to participate. However, feel free to contact me at any time with any questions or concerns you may have about this study.

Sincerely,

Erin Lipkind
Librarian
Lewis and Clark Elementary School
Missoula, Montana

Title: Teacher, Leadership, and Curriculum Variables which Contribute to Student Understanding of Indian Education for All Content.
SPONSOR: Montana Office of Public Instruction
PROJECT DIRECTOR:
Erin Lipkind
1581 Cornerstone Drive
Missoula, MT 59802
Phone: (406) 207-5429 (home) (406) 728-2400 X4381 (work)
Email: erin.lipkind@umontana.edu (home) erlipkind@mcps.k12.mt.us (work)

Dear Teacher:

You are being asked to take part in a research study analyzing the variables which contribute to student understanding of Indian Education for All (IEFA) content. You have been chosen because you teach in a school located in Missoula County. The purpose of the research study is to learn how the Montana Office of Public Instruction (OPI) can best assist Montana teachers to implement IEFA. This portion of the study will provide insight into the teacher, leader, and curriculum variables which impact student learning of information about the history, culture, diversity, and sovereignty of Montana's Indian peoples.

Your school superintendent has agreed to allow your school district to participate in this study. However, your participation in this study is **voluntary**. If you agree to take part in this research study you will be assisting the state in determining the best use of Indian Education funding to meet teacher, leadership, and student needs. While district level results will be available to OPI and your school superintendent upon his or her request, individual responses are **confidential**. **At no time will your answers be traceable directly to you**. The intention is to get an overall picture of Missoula County's implementation of the IEFA mandate to date. The completed study will be available for your perusal approximately June 2009.

Participation in the study will require that you complete the attached survey. The survey will take about twenty minutes to complete. Again, **all information you provide is confidential**. Please complete the survey during the designated meeting time. Remove the attached consent form and place it in the envelope labeled "consent forms." Place the completed survey in the envelope labeled "completed surveys."

Thank you for your participation. Your answers will help inform the Indian Education implementation process. Please contact me if you have any questions or concerns.

Sincerely,

Erin Lipkind
Librarian
Lewis and Clark Elementary School
Missoula, Montana

Title: Teacher, Leadership, and Curriculum Variables which Contribute to Student Understanding of Indian Education for All Content.
SPONSOR: Montana Office of Public Instruction
PROJECT DIRECTOR:
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Dear Fifth Grade Teacher:

You are being asked to take part in a research study analyzing the variables which contribute to student understanding of Indian Education for All (IEFA) content. You have been chosen because you teach fifth grade in a school located in Missoula County. The purpose of the study is to learn how the Montana Office of Public Instruction (OPI) can best assist Montana teachers to implement IEFA by examining what students know and what teachers and school leaders need in order for student knowledge to increase.

Your school superintendent has agreed to allow your school district to participate in this study. However, your participation in this study is **voluntary**. By consenting to participate in this study, you are agreeing to:

(1) Complete a teacher survey which will provide insight into the curriculum and teacher variables which impact student learning of information about the history, culture, diversity, and sovereignty of Montana's Indian peoples.
(2) Administer a student assessment developed by this researcher and based on the Essential Understandings of Montana Indians as part of your regular classroom activities. The intention is to develop an understanding of the **cumulative knowledge** students have acquired over their K-5 education, **not** what they may have learned in grade five.

If you agree to take part in this research study you will be assisting the state in determining the best use of Indian Education funding to meet teacher, leadership, and student needs. While district level results will be available to OPI and your superintendent upon request, individual teacher and student responses are **confidential**. **At no time** will your responses be traceable directly to you. The intention is to get an **overall** picture of Missoula County's implementation of the IEFA mandate to date.

Participation in the study will require the following:

(1) You complete the attached teacher survey. The survey will take about twenty minutes to complete. Again, **all information you provide is confidential**. Please complete the survey during the designated meeting time. Remove the attached consent form and place it in the envelope labeled "consent forms." Place the completed survey in the envelope labeled "completed surveys."
(2) Students to complete the attached assessment, which should take, at most, thirty minutes. Please have students complete the assessment between March 1 and March 15. Seal completed assessments in the attached pre-addressed, postage-paid envelope and drop them in the mail.

Thank you for your participation and remember, this study will help inform the Indian Education implementation process. Please don't hesitate to contact me if you have any questions or concerns**.** The completed study will be available for your perusal approximately June 2009.

Sincerely,

Erin Lipkind
Librarian
Lewis and Clark Elementary School

Title: Teacher, Leadership, and Curriculum Variables which Contribute to Student Understanding of Indian Education for All Content.
SPONSOR: Montana Office of Public Instruction
PROJECT DIRECTOR:
Erin Lipkind
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Email: erin.lipkind@umontana.edu (home) erlipkind@mcps.k12.mt.us (work)

Dear School Principal:

I am writing for permission to conduct a research study within your school. I wish to study the curriculum, teacher, and leadership variables which contribute to student understanding of Indian Education for All (IEFA) content. Your school has been chosen because it is an elementary school located in Missoula County. The purpose of study is to learn how the Montana Office of Public Instruction (OPI) can best assist Montana teachers and school leaders to implement IEFA. Your school superintendent has agreed to allow your district to participate in this study.

Participation will require teachers in grades 2-5 and elementary school principals to complete surveys which will provide insight into the curriculum, teacher, and leadership variables which impact student understanding of the history, culture, diversity, and sovereignty of Montana's Indian peoples. They should take about twenty minutes to complete. Fifth grade teachers, by consenting to participate, must additionally agree to administer a student assessment developed by this researcher and based on the Essential Understandings of Montana Indians as part of their regular classroom activities. This assessment should take about 30 minutes to complete. The intention is to develop an understanding of the **cumulative knowledge** students have acquired over their K-5 education, **not** what they may have learned in grade five.

Your school's participation in this study, and your participation as the school leader, is **voluntary**. However, if you and your school agree to take part in this research study you will be assisting the state in determining the best use of Indian Education funding to meet teacher, leadership, and student needs. While district level results will be available to OPI and school superintendents upon request, individual responses will be **confidential**. At no time will a teacher's or principal's answers be traceable directly to that individual. The intention is to get an **overall** picture of Missoula County's implementation of the IEFA mandate to date. The completed study will be available for your perusal approximately June 2009.

I will be contacting you shortly to discuss your desire to participate and work out the details of my visit to your school building. However, feel free to contact me at any time with any questions or concerns you may have about this study.

Sincerely,

Erin Lipkind
Librarian
Lewis and Clark Elementary School
Missoula, Montana

APPENDIX E

INFORMED CONSENTS

SUBJECT INFORMATION AND INFORMED CONSENT (Principal)

Title: Teacher, Leadership, and Curriculum Variables which Contribute to Student Understanding of Indian Education for All Content.

Sponsor: Montana Office of Public Instruction

Project Director:
Erin Lipkind
1581 Cornerstone Drive
Missoula, MT 59802
Phone: (406) 207-5429 (home) (406) 728-2400 X4381 (work)
Email: erin.lipkind@umontana.edu (home) erlipkind@mcps.k12.mt.us (work)
Faculty Advisor:
Darrell Stolle
Phone: (406) 243-5126 Email: Darrell.Stolle@umontana.edu

Special instructions:
This consent form may contain words that are new to you. If you read any words that are not clear to you, please ask the person who gave you this form to explain them to you.

Purpose: You are being asked to take part in a research study analyzing the curriculum, teacher, and leadership variables which contribute to student understanding of Indian Education for All (IEFA) content. You have been chosen because you are the principal of a school containing grades K-5 located in Missoula County. The purpose of the research study is to learn how the Montana Office of Public Instruction (OPI) can best assist Montana teachers and school principals to implement IEFA.

Procedures: Your participation in this study is **voluntary**. However, if you agree to take part in this research study you will be assisting the state in determining the best use of Indian Education funding to meet teacher, leadership, and student needs. Participation in the study will require that you complete the attached survey. The survey will take about twenty minutes to complete.

Risks/Discomforts: There is no anticipated discomfort for those contributing to this study, so risk to participants is minimal.

Benefits: This portion of the study will provide insight into the teacher, leader, and curriculum variables which impact student learning of information about the history, culture, diversity, and sovereignty of Montana's Indian peoples. Study results will be reported to the Montana Office of Public Instruction, who may use the results to inform the Indian Education for All implementation process. There is no promise that you will receive any benefit from taking part in this study. The completed study will be available for your perusal approximately June 2009.

Confidentiality: Your identity will be kept confidential. At no time will your completed survey be directly traceable to you. Your signed consent form will be stored in a cabinet separate from the data. Only the researcher and her faculty supervisor will have access to the files.

Compensation for Injury: Although we believe that the risk of taking part in this study is minimal, the following liability statement is required in all University of Montana consent forms.

> In the event that you are injured as a result of this research you should individually seek appropriate medical treatment. If the injury is caused by the negligence of the University or any of its employees, you may be entitled to reimbursement or compensation pursuant to the Comprehensive State Insurance Plan established by the Department of Administration under the authority of M.C.A., Title 2, Chapter 9. In the event of a claim for such injury, further information may be obtained from the University's Claims representative or University Legal Counsel. (Reviewed by University Legal Counsel, July 6, 1993)

Voluntary Participation/Withdrawal: Your decision to take part in this research study is entirely voluntary. You may leave the study for any reason. You may refuse to take part in or you may withdraw from the study at any time without penalty or loss of benefits to which you are normally entitled.

Questions: If you have any questions about the research now or during the study please contact the researcher at any time.

Erin Lipkind
1581 Cornerstone Drive
Missoula, MT 59802
Phone: (406) 207-5429 (home) (406) 728-2400 X4381 (work)
Email: erin.lipkind@umontana.edu (home) erlipkind@mcps.k12.mt.us (work)

If you have any questions regarding your rights as a research subject, you may contact the Chair of the IRB through The University of Montana Research Office at 243-6670.

Statement of Consent:
I have read the above description of this research study. I have been informed of the risks and benefits involved, and all my questions have been answered to my satisfaction. Furthermore, I have been assured that any future questions I may have will also be answered by a member of the research team. I voluntarily agree to take part in this study. I understand I will receive a copy of this consent form.

_____
Printed (Typed) Name of Subject

_____ _____
Subject's Signature Date

SUBJECT INFORMATION AND INFORMED CONSENT (teachers)

Title: Teacher, Leadership, and Curriculum Variables which Contribute to Student Understanding of Indian Education for All Content.

Sponsor: Montana Office of Public Instruction

Project Director:
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Faculty Advisor:
Darrell Stolle
Phone: (406) 243-5126 Email: Darrell.Stolle@umontana.edu

Special instructions: This consent form may contain words that are new to you. If you read any words that are not clear to you, please ask the person who gave you this form to explain them to you.

Purpose: You are being asked to take part in a research study analyzing the curriculum, teacher, and leadership variables which contribute to student understanding of Indian Education for All (IEFA) content. You have been chosen because you teach in a school located in Missoula County. The purpose of the research study is to learn how the Montana Office of Public Instruction (OPI) can best assist Montana teachers and school principals to implement IEFA.

Procedures: Your participation in this study is **voluntary**. However, if you agree to take part in this research study you will be assisting the state in determining the best use of Indian Education funding to meet teacher, leadership, and student needs. Participation in the study will require that you complete the attached survey. The survey will take about twenty minutes to complete.

Risks/Discomforts: There is no anticipated discomfort for those contributing to this study, so risk to participants is minimal.

Benefits: This portion of the study will provide insight into the teacher, leader, and curriculum variables which impact student learning of information about the history, culture, diversity, and sovereignty of Montana's Indian peoples. Study results will be reported to the Montana Office of Public Instruction, who may use the results to inform the Indian Education for All implementation process. There is no promise that you will receive any benefit from taking part in this study. The completed study will be available for your perusal approximately June 2009.

Confidentiality: Your identity will be kept confidential. At no time will your completed survey be directly traceable to you. Your signed consent form will be stored in a cabinet separate from the data. Only the researcher and her faculty supervisor will have access to the files.

Compensation for Injury: Although we believe that the risk of taking part in this study is minimal, the following liability statement is required in all University of Montana consent forms.

> In the event that you are injured as a result of this research you should individually seek appropriate medical treatment. If the injury is caused by the negligence of the University or any of its employees, you may be entitled to reimbursement or compensation pursuant to the Comprehensive State Insurance Plan established by the Department of Administration under the authority of M.C.A., Title 2, Chapter 9. In the event of a claim for such injury, further information may be obtained from the University's Claims representative or University Legal Counsel. (Reviewed by University Legal Counsel, July 6, 1993)

Voluntary Participation/Withdrawal: Your decision to take part in this research study is entirely voluntary. You may leave the study for any reason. You may refuse to take part in or you may withdraw from the study at any time without penalty or loss of benefits to which you are normally entitled.

Questions: If you have any questions about the research now or during the study please contact the researcher at any time.

Erin Lipkind
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Email: erin.lipkind@umontana.edu (home) erlipkind@mcps.k12.mt.us (work)

If you have any questions regarding your rights as a research subject, you may contact the Chair of the IRB through The University of Montana Research Office at 243-6670.

Statement of Consent:
I have read the above description of this research study. I have been informed of the risks and benefits involved, and all my questions have been answered to my satisfaction. Furthermore, I have been assured that any future questions I may have will also be answered by a member of the research team. I voluntarily agree to take part in this study. I understand I will receive a copy of this consent form.

_____
Printed (Typed) Name of Subject

_____ _____
Subject's Signature Date

SUBJECT INFORMATION AND INFORMED CONSENT (5th grade teachers)

Title: Teacher, Leadership, and Curriculum Variables which Contribute to Student Understanding of Indian Education for All Content.

Sponsor: Montana Office of Public Instruction

Project Director:
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Missoula, MT 59802
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Faculty Advisor:
Darrell Stolle
Phone: (406) 243-5126 Email: Darrell.Stolle@umontana.edu

Special instructions: This consent form may contain words that are new to you. If you read any words that are not clear to you, please ask the person who gave you this form to explain them to you.

Purpose: You are being asked to take part in a research study analyzing the curriculum, teacher, and leadership variables which contribute to student understanding of Indian Education for All (IEFA) content. You have been chosen because you teach 5th grade in a school located in Missoula County. The purpose of the research study is to learn how the Montana Office of Public Instruction (OPI) can best assist Montana teachers and school principals to implement IEFA.

Procedures: Your participation in this study is **voluntary**. However, if you agree to take part in this research study you will be assisting the state in determining the best use of Indian Education funding to meet teacher, leadership, and student needs. Participation in this study will require you to complete a teacher survey which will provide insight into the curriculum and teacher variables which impact student learning of information about the history, culture, diversity, and sovereignty of Montana's Indian peoples. It will also require you to administer, as part of your regular classroom activities, a student assessment developed by this researcher and based on the Essential Understandings of Montana Indians. The intention is to develop an understanding of the **cumulative knowledge** students have acquired over their K-5 education, **not** what they may have learned in grade five.

Risks/Discomforts: There is no anticipated discomfort for those contributing to this study, so risk to participants is minimal.

Benefits: This portion of the study will provide insight into the teacher, leader, and curriculum variables which impact student learning of information about the history, culture, diversity, and sovereignty of Montana's Indian peoples. Study results will be reported to the Montana Office of Public Instruction, who may use the results to inform the Indian Education for All implementation process. There is no promise that you will receive any benefit from taking part in this study. The completed study will be available for your perusal approximately June 2009.

Confidentiality: Your identity will be kept confidential. At no time will your completed survey be directly traceable to you. Your signed consent form will be stored in a cabinet separate from the data. Only the researcher and her faculty supervisor will have access to the files.

Compensation for Injury: Although we believe that the risk of taking part in this study is minimal, the following liability statement is required in all University of Montana consent forms.

> In the event that you are injured as a result of this research you should individually seek appropriate medical treatment. If the injury is caused by the negligence of the University or any of its employees, you may be entitled to reimbursement or compensation pursuant to the Comprehensive State Insurance Plan established by the Department of Administration under the authority of M.C.A., Title 2, Chapter 9. In the event of a claim for such injury, further information may be obtained from the University's Claims representative or University Legal Counsel. (Reviewed by University Legal Counsel, July 6, 1993)

Voluntary Participation/Withdrawal: Your decision to take part in this research study is entirely voluntary. You may leave the study for any reason. You may refuse to take part in or you may withdraw from the study at any time without penalty or loss of benefits to which you are normally entitled.

Questions: If you have any questions about the research now or during the study please contact the researcher at any time.

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Email: erin.lipkind@umontana.edu (home) erlipkind@mcps.k12.mt.us (work)

If you have any questions regarding your rights as a research subject, you may contact the Chair of the IRB through The University of Montana Research Office at 243-6670.

Statement of Consent:

I have read the above description of this research study. I have been informed of the risks and benefits involved, and all my questions have been answered to my satisfaction. Furthermore, I have been assured that any future questions I may have will also be answered by a member of the research team. I voluntarily agree to take part in this study. I understand I will receive a copy of this consent form.

_____
Printed (Typed) Name of Subject

_____ _____
Subject's Signature Date