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A Case Study of the Teacher Advancement Program on a Native American Reservation

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COLLEGE OF EDUCATION

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Abstract

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MS, University of Oregon, 1991

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

A school district on a Native American reservation in the southwestern region of the U.S. decided to implement the Teacher Advancement Program (TAP) to improve teacher instructional effectiveness and student academic achievement. Although researchers have documented successes of the TAP in high-poverty urban school districts across the U.S., little is known regarding the TAP implementation in remote Native American cultural context schools. The purpose of this study was to investigate if the collaborative process of the TAP implementation changed the teachers' instructional practices. Using Vygotsky's social constructivism, which emphasizes that learning happens through interactions and cooperation of people in their environments, this qualitative case study investigated 9 teachers' perceptions of the TAP implementation using interview, walkthrough observation and document analysis at the schools. The research questions focused on teachers' perceptions of TAP elements, their experiences, changes in practices and the influence of the Native American setting. A qualitative data analysis software program and constant comparison method were used to manage and analyze the qualitative data. Findings indicated that positive collegial collaboration, teacher attitude, and instructional change were associated with the TAP implementation, teacher evaluation (most challenging experience), teacher professional growth, and student academic achievement growth (most rewarding experiences). A district professional development plan was created to build on the strength of the TAP collegial collaboration and to meet the rigorous demand of the new state College and Career Readiness standards. The change of teachers' working in isolation to collegial collaboration reflects a positive social change for continuous inquiry into both student and teacher learning.

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Dedication

First and foremost, I dedicate this project study to my family for their support, encouragement and patience through this journey. To my dear husband, Moses, thank you for believing in me and cheering me on along the way through this arduous long ride to achieving my goal. To my four beautiful children, Joseph, Esther, Abraham, and Marc, I want to thank you for being the drive that propelled me through each obstacle I encountered for the past 6 years. This study would not have been possible without you.

Next, I dedicate this study to the students, teachers, and district leaders I work with in the school district. Your continuous efforts in improving the learning for the native community was where I drew the inspiration for my study. I do believe the efforts will make the learning environment better for generations to come.

Acknowledgments

I would like to acknowledge several individuals who have assisted me in completing my study. First, I want to express my gratitude to my chair, Dr. Billie Andersson, and my methodologist, Dr. Kathleen Van Horn. Without their feedback, patience, and assistance, I would not have been able to get to the finish line. Next, I want to acknowledge Dr. Bob Hogan for his extensive knowledge on Walden doctoral study and the opportunities he provided for me to network with other doctoral students and instructors through weekly SKYPE meetings. Lastly, I want to acknowledge my fellow doctoral students, whom I met either through the course or through the SKYPE Get Together, I appreciate them for their collegiality and support. I could not have thanked them enough for enriching the process of my doctoral study at Walden and making the end of the journey enjoyable for me.

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Introduction

The landmark No Child Left Behind Act (NCLB, 2001) mandated test-based accountability for public schools to increase the student academic achievement in the United States. All public schools are required to make Annual Yearly Progress (AYP) on the high-stake state assessment each year (Dee & Jacob, 2011). Plagued by the isolated geographical location and poverty, for many years the seven campuses of one school district on a Native American reservation in the northeastern section of Arizona State have been struggling with AYP mandated by the NCLB. In response to the needs for high-quality teachers and improvement of student academic achievement, the superintendent of the district decided to enter a partnership with the Arizona Ready for Rigor Project to implement a research-based systemic school reform framework, the Teacher Advancement Program (TAP).

The Arizona Ready for Rigor Project was created by the Arizona State University (ASU) and the Arizona Department of Education after being awarded a five-year grant from the Teacher Incentive Fund (TIF). The goal of the project was to work with historically struggling schools in the state of Arizona to implement the TAP school reform. This partnership was approved by the school board to be used district-wide and received a majority vote of teachers (76%) from the district for implementation. The TAP was implemented in the 2010-11 school year at all schools in the district. Although the NCLB era was ended when the Every Student Succeeds Act (ESSA) was signed into law by President Obama in 2015, the high academic standards for all students and the

accountability system were still the main themes of the ESSA (U.S. Department of Education, 2015). Under the new ESSA legislation, the new accountability system will be state driven and based on multiple measures (U.S. Department of Education, 2015), which is different from the one single high stakes test measure under the NCLB Act (2002).

The Local Problem

In one school district located on a Native American Reservation in the southwestern section of the United States, more than 97% of the student population is Native American; all students in the district receive free or reduced lunch based on the Federal Food Program guidelines. Per statistics from the County Statistic in 2009, approximately 42% of this American population lives below the Federal Poverty level. The median household income on this Native American reservation is about $22,000 per year, which is approximately half of the median household income of those living in Arizona (de la Garza, e-mail communication, February 2, 2011). As the school district is located on the Native American reservation, there is no property tax based funding for the schools. The district must rely on the federal grants and funding to stay in operation. The low socioeconomic and minority status of the Native American student subgroup has a strong impact on the local district and is blamed for maintaining the achievement gap between students on the reservation and those from the mainstream culture (Milner, 2013). All seven schools of this district have not met AYP under NCLB. In addition, "three schools were declared underperforming and were in various stages of

improvement and restructuring status per state and federal guidelines and regulation" (de la Garza, personal communication, 2011).

The persistent achievement gap between the Native American student population and its White and Asian student populations has limited the opportunities for future success for this subgroup (Baum, Ma, & Payea, 2013; Center for Labor Market, 2009; Corak, 2013; McKinsey & Company, 2009; The Broad Prize for Urban Education, n.d.). Some teachers reportedly expect less and do not challenge those students who live in poverty, which results in low student academic achievement (The Broad Prize for Urban Education, n.d.). Corak (2013) suggested the inequality of parental income status tied closely to the intergenerational income immobility in the United States. McKinsey and Company (2009) reported a similar finding that the school performance and socioeconomic background are highly correlated in the United States, but not in other countries, such as Finland. Baum and Ma (20013) stressed the gap for secondary enrollment rate between the minorities (Black and Hispanic) and the majority (White), as well as between the low income and high income families are very persistent. Even when the Black, Hispanic, and students from low-income families enroll in postsecondary education, they are less likely to complete their study (Baum et al., 2013). Based on the labor market of the 21st century, a high school graduate has less job opportunity than an individual who holds a postsecondary or a more advanced degree (Baum et al., 2013; Center for Labor Market, 2009).

To improve student academic achievement and to better serve their students, the district has undergone many changes in the past decade. For example, the district

facilitated the collaboration among teachers from each grade level to align the K-12 curriculum to the state standards. The K-12 curriculum maps and formative assessment were created for all grades in English language arts and math content areas as the results of the collaboration. Other efforts for closing the gap also included restructuring the grade configuration for all three elementary schools and implementing Response to Intervention (RtI) for struggling students (de la Garza, personal communication, 2011). In 2010, the teachers of the school district decided to be a partner school of the ASU in adopting the TAP to take part in the Arizona for Rigor Project.

The TAP is a school reform framework proven to improve the effectiveness of teachers and to increase student academic achievement (Eckert, 2013; Mann, Leutscher, & Readon, 2013; NIET, 2011; Ritter & Barnett, 2016). The goal of the TAP school reform is to utilize the four elements of the TAP framework to "attract, develop, motivate and retain the very best talent for a K-12 system that provides all children with high-caliber teachers each school year" (NIET, 2010, p.2). The four elements of the TAP framework are multiple career paths, on-going applied professional growth, performance based compensation, and instructional focused accountability (NIET, 2012). Through collegial collaboration, peer coaching, and shared leadership of the multifaceted approach, researchers revealed that the TAP model has shown its promise to ensure teacher quality and effectiveness in every classroom which, in turn, resulted in the increase of student academic achievement (Eckert, 2009; Eckert, 2013; Hudson, 2010; NIET, 2010; Springer, Ballou & Peng, 2008).

Although the TAP has shown positive results for the schools serving high poverty student populations in various states for over ten years (Hudson, 2010; NIET, 2012; Springer et al, 2008), most of the documented results were from schools in the urban or inner city high poverty areas. The problem is that little is known about the TAP implementation and its impact on the teachers' instructional practices and student achievement in schools on any rural Native American reservation. I used this qualitative case study to explore the teachers' experiences with the TAP implementation to identify the most successful and challenging experiences of the process of the TAP implementation.

Rationale

Evidence of the Problem at the Local Level

The superintendent of the district introduced the TAP model of school reform framework to all seven schools in the district and asked the teaching staff to support, as well as to implement, the TAP model. The superintendent intended to increase student academic achievement to provide an education which would create future opportunities for the Native American students served in the district. The TAP was introduced to the teachers at each school site by the representative from the ASU after the school board approved the collaboration with the University to implement the framework in the spring of 2011. After discussions of the pros and cons for implementing the TAP framework among the teachers, the superintendent of the district decided to conduct a district wide voting process to determine if there was a critical mass of teachers who were in support of the TAP to ensure the success of the implementation. Based on the results of the

teacher approval vote (76%) for implementing the TAP, the school superintendent decided to implement the TAP framework district wide.

According to the Arizona State Report Card in 2010 (Arizona Department of Education, 2010), the achievement scores for certain student subgroups, such as African American, Native American, English Language Learners (ELLs), and the students with exceptional needs, were still lower than those of Anglo and Asian students. The need in Arizona school systems is to improve student achievement of these student sub-groups. A news release from the Teacher Incentive Fund (TIF) grant writing agency provides empirical evidence of the association between students' academic achievement and teacher effectiveness (ASU, 2010). The efforts of the ASU in creating the university-school partnership model in educational reform to improve teacher quality and student achievement was recognized by the federal government and was rewarded the TIF grant to help reform in Arizona schools in 2010 (ASU, 2010).

The TAP schools have shown their effectiveness in improving student academic achievement (Ecker, 2009; Eckert, 2013; Hudson, 2010; NIET, 2010; Spinger, Ballou, & Peng, 2008). Originally in August 2000, only five elementary schools had implemented the TAP comprehensive school reform system in Arizona. The number of schools that have implemented the TAP system increased to 59 in 2009 (NIET, 2012). According to an experimental research report (Schacter, Thum, Reifsneider, & Schiff, 2004), students in the TAP schools scored higher on the state achievement test than the control schools after 3 years of implementation of the TAP system in Arizona. The control schools in this study were the comparison schools with similar student achievement, school size,

percent of students eligible for free lunch, school grade configuration, and location, but without the TAP implementation (Schacter et al., 2004). There was positive change of teachers' attitudes toward the TAP system after three years of implementation, especially in the areas of collegiality and personal professional growth (Schacter et al., 2004).

Based on the demonstrated effectiveness of the TAP framework in improving teacher quality and student learning, the ASU partnered with the Arizona Department of Education (ADE) and the NIET, creating the Arizona Ready for Rigor Project to work with 70 historically struggling schools in 17 Arizona districts. The project initially included three school districts on a Native American reservation in the southwestern section of the United States. All these districts attempted to raise the student achievement (ASU, 2010). The partner schools in the project received assistance and support from the ASU and NIET for the implementation. The project paid for the stipends for the master teacher and the mentor teachers for performing their extra duties. The performance based compensation for all teachers and the principals was also paid out by the project if student achievement scores met the value-added performance growth requirement, which tied into the element of the Instructionally Focused Accountability of the TAP, during the five contracted years of the partnership (NIET, 2012). However, after two years of implementation, only one school district on the Native American reservation continued with the TAP implementation.

Evidence of the Problem from the Professional Literature

The U.S. educational system has documented and been criticized for its achievement gap among the minorities, low socioeconomic student populations, and their

mainstreaming counterpart. Most schools and districts did not have the evidence until after analyzing the disaggregated student achievement data of the sub-group student population mandated by the NCLB Act (2001). Based on the National Indian Education Study (National Center for Education Statistics, NCES, 2009), the Native American and Hispanic students did not score significantly differently from each other, but did score higher than the Black students in math. However, Native American students scored significantly lower than the White and Asian American student population on both reading and math tests of NAEP (NCES, 2009). Although there was no significant difference among the Native American, Black, and Hispanic student subgroups in the NAEP reading scores, the findings substantiated the existing achievement gap between these three student subgroups (the Native American, Hispanic, and Black students) and their White and Asian counterparts.

The average reading score gaps between White and Native American students "ranged from 8 to 47 points at Grade 4 and from 6 to 35 points at Grade 8" (NECS, 2009, p. 2), and the average math score gaps "ranged from 7 to 33 points at Grade 4 and from 13 to 44 points at Grade 8 in the 12 states selected for the study in 2009" (NCES, 2009, p.3). The score gaps remained the same in 8th grade reading, but were larger in 4th grade reading, 4th grade math, and 8th grade math when compared with the scores in 2005 in the National Indian Education Study 2011 report (NCES, 2011). The achievement gap was persistent between the Native American students and the White students over the six-year span (see Figures 1 & 2).

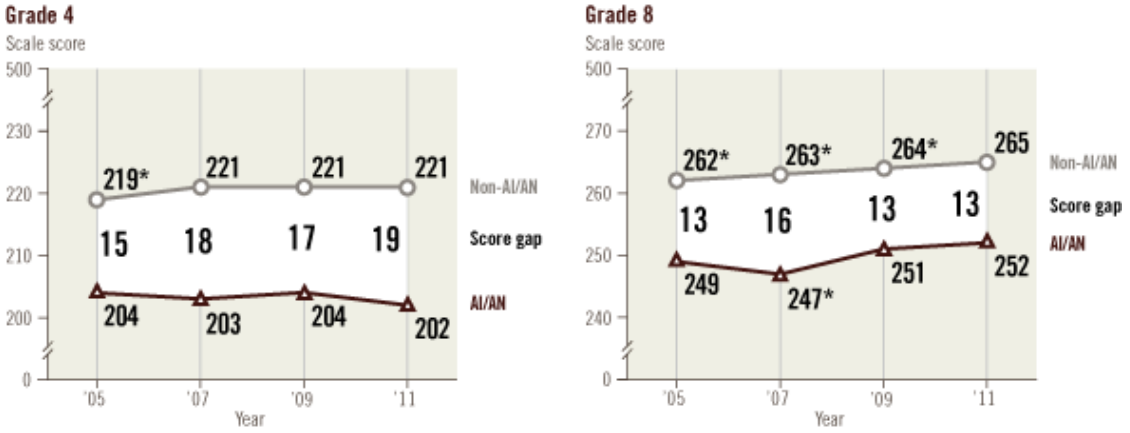

Figure 1. Trend in NAEP reading average scores and score gaps for fourth- and eighth-grade AI/AN and non-AI/AN students. From *National Indian education study, 2011: The educational experiences of American Indian and Alaska Native students at Grades 4 and 8*, by the U.S. Department of Education, 2011, p. 2. Retrieved from http://nces.ed.gov/nationsreportcard/pdf/studies/2012466.pdf

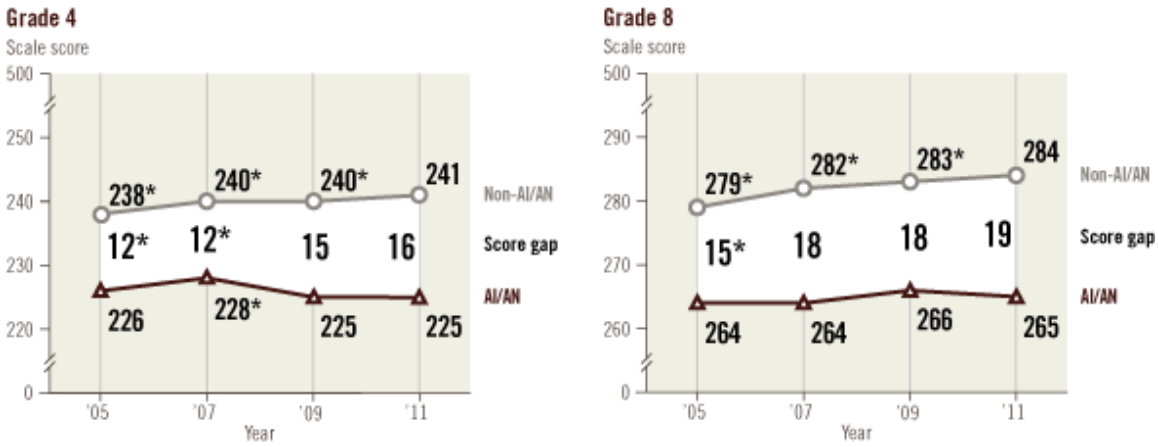

Figure 2: Trend in NAEP mathematics average scores and score gaps for fourth- and eighth-grade AI/AN and non-AI/AN students. From *National Indian education study, 2011: The educational experiences of American Indian and Alaska Native students at Grades 4 and 8*, by the U.S. Department of Education, 2011, p. 2. Retrieved from http://nces.ed.gov/nationsreportcard/pdf/studies/2012466.pdf

Although the African American, Hispanics, and Native American students made some gains in improving student academic performance in reading and math based on the

NAEP results, the achievement disparity persisted through 1992 to 2007 in 4th grade math and reading and 8th grade math (Editorial Projects in Education Research Center, 2011). The gap is further substantiated by the trend in NAEP achievement-level results by race/ethnicity from a 1990 to 2013 report on the Nation's Report Card website (The Nation's Report Card, 2013). For example, both Hispanic and Black student sub-groups had been making a gradual increase at the proficient level and the above proficient level in both reading and math on the NAEP assessment from 1990 to 2013. The Native American student sub-group improved only on the Math portion of the NAEP. As for reading, the data displayed a decrease at the proficient or above the proficient categories on NAEP results for both 4th and 8th grade (The Nation's Report Card, 2013). It is evident that there is a need for schools to improve the student academic performance for Native Americans student subgroup.

I explored the TAP implementation on a Native American reservation. The purpose of this study was to discern if teachers perceived the collaborative process involved in the TAP implementation to influence the teachers' instructional practices. The focus of this study was on the implementation of the TAP program on an isolated Native American reservation. The superintendent of the school district also wanted to know the perceptions of teachers of the TAP implementation to determine which element of the TAP is most beneficial to teacher effectiveness. This study is significant because it helped fill in the gap in both research and practices regarding implementing the TAP school reform framework on a Native American reservation. The experiences, attitudes, and perceptions of the teachers in this case study were to serve as a model to improve

teacher quality and to impact student learning for schools from similar cultural contexts for school improvement.

Definition of Terms

Arizona Ready-for-Rigor Project: Led by the Arizona State University, in partnership with NIET and Arizona Department of Education, the project networks with 70 schools in 17 partner districts, serving 46, 011 high needs students statewide (ASU, 2012).

Career Teacher: A career teacher is a teacher who teaches in the regular classroom in a TAP school. He or she is responsible for attending the cluster group meeting each week for continuous professional growth. In collaboration with master teacher and his or her assigned mentor, the career teacher will keep a current and updated IGP that is related to the school goal (TAP Foundation, 2010).

Certified TAP Evaluator: All principals, master teacher (academic coach in the specific district), and mentor teachers are required to go through different phases of an evaluation training program and pass a performance-based certification exam to become a certified TAP evaluator. All certified TAP evaluators are required to renew their certification every year to ensure their knowledge of the TAP Rubric and to maintain the inter-rater reliability (TAP Foundation, 2010).

*Individual Growth Plan (IGP)***:** The IGP is developed by each career teacher with the assistance from a master teacher (academic coach) or mentor teacher. Through the IGP, the teachers will have a concrete plan to reach their instructional goals to improve student academic achievement (TAP Foundation, 2010).

Master Teacher/Academic Coach: Master teacher (academic coach in the specific district) oversees the implementation of the TAP framework and shares much of the leadership responsibility with the principal. He or she is responsible for conducting TAP teacher evaluations and planning the cluster group meetings, activities, and their outcomes regarding the student academic achievement. The master teacher (academic coach) is responsible for the professional development of the teachers, as well as facilitating the curriculum and assessment planning (NIET, 2006.).

Mentor teacher: Mentor teachers provide peer coaching and mentoring to their assigned mentees. In collaboration with the master teacher (academic coach), mentor teachers also plan and sometimes facilitate the cluster group meeting. Mentor teachers are responsible for their mentees' IGPs, as well as for the TAP teacher evaluations (NIET, 2006).

Multiple Career Paths: Classroom teachers in a TAP school can advance to different positions, such as master teacher (academic coach) or mentor teacher. These positions allow teachers to build their leadership capacities at school and have additional responsibilities, as well as more authority than regular classroom teachers (NIET, 2012).

National Institute for Excellence in Teaching (NIET): The institute was established by the founder of TAP, Lowell Milken, to oversee and maintain the operation of the TAP implementation so the school reform framework can be sustainable (NIET, 2014).

On-going Applied Professional Growth (OAPG): In a TAP school, time is built in for job-embedded, on-going professional learning which includes a weekly cluster group

meeting, individual growth plan (IGP), and classroom-based support. All the processes of OAPG are focused on the school goal to improve student academic achievement (NIET, 2012).

STEPS for Effective Learning: The Effective Learning process provides the guiding process for all the professional learning in the cluster group. There are five different steps in the process:

1. Identify students' learning need based on both quantitative and qualitative data.
2. Obtain new learning.
3. Develop the new learning.
4. Apply the new learning to teacher's classroom instructions.
5. Evaluate the impact of the learning on student performance (NIET, 2012).

TAP Leadership Team: This Leadership Team is comprised of the principal, master teacher, and all mentor teachers in a TAP school. Led by the school principal, the TAP leadership team analyzes data to set the school goal for the student academic improvement and to develop and review the goals, activities, and outcomes of cluster groups. All members of the TAP leadership team need to become certified TAP evaluators and maintain the inter-rater reliability to conduct teacher evaluations (NIET, 2006).

*TAP Rubric***:** The TAP rubric is used as the base for measuring teacher's instructional performance. The rubric is developed based on the work of a long list of researchers (NIET, 2012). It is broken down into three different domains (Designing and

Planning Instruction, The Learning Environment, and Instructions), has a total of 19 indicators, and has three performance levels (NIET, 2006).

Teacher Advancement Program (TAP): TAP is a systemic school reform framework with the goal to attract, retain, motivate, and develop quality teachers to increase student achievement (NIET, 2012).

Teacher quality: Per Peske and Hayhock (2006), teacher quality can be gauged by teachers' academic skills and knowledge, their mastery of content and experience, and teachers' pedagogical skills. A quality teacher is a highly effective teacher who produces high gains in student academic achievement scores (Peske & Haycock, 2006).

Value-added score: The value-added score is the statistical model used for measuring the growth in student academic achievement scores each year. Students' starting academic achievement scores will not affect the value-added score because there are formulated to gauge only the improvement in student achievement (NIET, 2012).

Significance of the Study

The K-12 schools in the educational system of the United States have not been able to attract and retain quality teachers historically, and the problem is especially prevalent at schools in the high poverty areas because of the challenges of poor pay, poor working conditions, and lack of support of public school teachers (Leech, Haug, & Bianco, 2015; NIET, 2011), which is the case of the Native American School District. Because of the isolation and high poverty level of the area, the school district in my study is also experiencing high turnover rate of school principals and teachers and having difficulty hiring high quality teachers. Compounded by the persistent achievement gap

(from 1999 to 2013, the Nation's Report Card) between the Native American student population and its mainstream counterparts, there are limited opportunities for individuals and the under-educated workforce from this local area. This situation further endangers the economy, society, and security of not just the local area but of the nation (Baum & Ma, 2013; Center for Labor Market, 2009; McKinsey & Company, 2009; The Board Prize for Urban Education, n.d.).

To improve the quality in education for the next generation, the link between high student academic achievement and other factors has to be identified. For example, researchers have established the link between teacher quality and student achievement (Aaronson, Barrow, & Sander, 2007; Rokoff, 2004). Other researchers established the fact that teacher quality is the most important factor for the increase of student achievement in the field of education (Aaronson et al., 2007; Hanushek, 2013; Headden, 2014; Rokoff, 2004; Simon & Johnson, 2013).

The TAP model specifically targets these challenges by implementing the performance-based compensations for high performing teachers so the schools will be able to attract and retain quality teachers in the high poverty area schools. With the built-in support of the master teacher and mentor teacher, and the on-going, job-embedded professional development through collegial collaboration of the TAP model, the teachers no longer work in isolation and can function in a culture of learning that promotes student achievement (Mann, Leutscher, & Reardon, 2013). Using a quasi-experimental and mixed method designed, Mann et al. (2013) found 84% of career teachers believed the discussions and collaboration in cluster group meeting contributed to the improvement of

their teaching quality. Consequently, the TAP system was able to impact a total of 110 schools, 3,400 teachers, and 49,620 students across 10 states and the D.C. area with the idea of teacher excellence, student achievement and opportunities for all (NIET, 2012c).

There is a gap in both literature and practice documenting the effectiveness of the TAP framework at the schools on a Native American reservation. In this study, insights gleaned from the data analysis were provided to fill the gaps in both literature and practices concerning the implementation of the TAP at schools under the Native American cultural contexts. The results of the study were used for designing a professional development plan which utilizes the collegial collaboration to meet and support the learning needs of teachers in the district so the teachers may be able to enhance student learning and to close the achievement gap.

Research Questions

The purpose of this study was to discern if teachers perceived the collaborative process involved in the TAP implementation to influence the teachers' instructional practices. Based on the purpose of the study, the following research questions were investigated:

RQ1: How did teachers perceive the four different elements of the TAP framework?

RQ2: To what extent were the experiences of the implementation of the TAP framework challenging or rewarding to the teachers involved?

RQ3: To what extent did the TAP process change teachers' instructional practices in the classroom?

RQ4: How did the Native American cultural setting influence the implementation of the TAP school reform framework?

These research questions guided the semi-structured interview questions (Appendix B) to gather useful information regarding teachers' TAP implementation experiences and whether the implementation helped refine teacher's instructional strategies based on the learning needs of students through student data analysis.

Review of the Literature

Three major areas will be the focus of this review of literature. These areas include: the theoretical framework related to the study, the effectiveness of the TAP, and the critical review of the four elements of the TAP framework. Walden online library, Arizona State Library (online), electronic databases (such as ERIC, EBSCOhost, Academic Search Premier, & ProQuest), online websites, and books were the major sources for the search. The key words used for the search included *achievement gap, school reform, teacher quality, peer coaching, collegial (or peer) collaboration,* and *shared leadership*. The articles found, all of which are from book chapters, public online documentations, and peer-reviewed journal articles, are relevant to the study. In the remainder of the section, the discussion is presented in detail. Lastly, the review of the four elements of the TAP school reform framework will be discussed.

Theoretical Framework

The implementation of the TAP framework consists of a systemic procedure of collegial collaboration, peer coaching, and shared leadership, which all have their theoretical foundation in social constructivism. Vygotsky (1978) believed that learners

construct their own knowledge. The focus of his theory was that the knowledge was built on the social interaction with other learners instead of the interaction with the environment as Piaget (1970) proposed. Vygotsky (1978) placed emphasis on the impact of the sociocultural context where the learning took place. Vygotsky postulated that students could only learn and develop through the interactions and cooperation with the people in their environment.

To Vygotsky (1978), learning is always a social process that varies from culture to culture, and the interaction among the learners plays an important role in how and when the learning takes place. Vygotsky's theory adds credence to the social process of learning and is the framework for the unique investigation of the Native American culture. In this study, attention was given directly to the job-embedded, on-going collegial process of the TAP implementation in a Native American cultural context.

Other theorists, such as Bruner (1966, 1996) and Bandura (1977, 1989), also added to the theoretical base of this study. When talking about motives for learning, Bruner (1966) believed that the learners who interacted with their peers toward a common goal tended to be more motivated. Just like Vygotsky (1978), Bruner believed that learning was facilitated by language through active dialogue between the instructors and learners as well as through the established abstract cultural context. Wood, Bruner, and Ross (1976) stressed the importance of scaffolding in developing specific skills of the learners. Although *scaffold* was termed by Wood, Bruner, and Ross (1976), the idea was originated from Vygotsky's (1978) Zone of Proximal Development (ZPD).

According to Vygotsky (1978), the ZPD is the distance between the child's actual development level and the child's potential level. Wood et al. (1976) posited that students can move from their actual development level to their potential development level with appropriate instructional scaffolds, which include the process of the guidance, support and interaction between the students and the teacher. In other words, the support and structured interactions from the more knowledgeable others are an important factor in facilitating learning and developing new skills. Instructional scaffolding serves as the theoretical base for the built-in support of the peer coaching system through the Mentor teacher and the Master teacher of the TAP framework.

Other theorists, such as Bandura (1989), also emphasized the importance of dialogue for learning. Bandura's (1997) model of triadic reciprocity explained the influence of peer modeling on self-efficacy. According to Bandura, the model of triadic reciprocity is described by the interactions of three interrelated factors which form a triangle: the person, the person's behaviors, and the environment the person is in. It was Bandura's belief that change of behavior (such as change of instructional strategies) would take place when the learner's self-efficacy (the learner's factor) was constructed and validated through peer modeling and comparative analysis of performance (the environmental factor).

The TAP framework is built upon creating the opportunities for a teacher to have job-embedded collaborations and conversations on issues related to his or her instructional practices, which is closely related to the work of Bruner (1966) and Bandura (1989). The built-in support, peer coaching, and modeling from the mentor teachers and

master teacher to the career teachers also mirror the theories of Bruner (1976, 1996) and Bandura (1997). The teachers in the TAP model work collaboratively toward the common goal of improving instructional practices and student achievement. The structured support from the mentor teacher and the master teacher is meant to build the career teachers' self-efficacy in improving the classroom instructions of the teachers. Through my study, a deeper understanding about the motivation created through peer collaboration toward the common goals will become clearer, and it could be one of the elements that changes a teacher's instructional practices (ACSA, 2011).

TAP Effectiveness

Since its first implementation in the 2000-2001 school year, the TAP system has been in existence for more than ten years in various states throughout the country. The TAP system is a school reform framework with the goal to attract, retain, and motivate quality teachers in the teaching profession by incorporating multiple career paths, on-going applied professional growth, performance based compensation, and instructional focused accountability into the framework. The TAP model emphasizes the importance of implementing all four components of the framework to ensure the results of teacher effectiveness and student achievement. According to the Research Summary Report from NIET (2011), the four interrelated TAP elements are "designed to enhance not only teacher performance, but also teacher job satisfaction, recruitment and retention in high-need schools" (p.2) Many school reforms in the past only emphasized one or two of the components and resulted in failure (Milken, 2012). However, evidence has shown the schools that implemented the TAP had consistently higher performance than non-TAP

schools, especially those serving student populations with high poverty rate and low academic performance (Eckert, 2013; Hudson, 2010; NIET, 2011; Mann et al., 2013; Springer et al., 2008).

Using a qualitative design, Eckert (2013) employed interviews, focus groups, and site based observations to investigate the TAP implementation in schools include Algiers Charter Schools in Louisiana, Amphitheater Unified School District #10 in Arizona, Charlotte-Mecklenburg schools in North Carolina, and South Carolina TAP schools. Eckert (2011) found these schools "have preliminary indicators showing student achievement, wide stakeholder support, improvement in recruitment and retention, and positive changes in school culture" (p. 1). Hudson (2010) conducted difference-in-differences model using "synthetic control matching methods" (p.1) to estimate the effect of TAP on student reading and math achievement scores. Hudson stated that the students in TAP schools significantly outperformed students in non-TAP schools in math by 0.15 standard deviations. Hudson (2010) found similar results in reading but with smaller estimated effect. In a quasi-experimental, longitudinal, and mixed method study of the TAP schools in Louisiana, Mann et al. (2013) found the students in TAP schools performed significantly higher after two years of implementation and the effect size remained constant from year 2 to year 4 of the implementation. In an independent, third party assessment of the TAP, Springer et al. (2008) used "a panel data set to estimate a TAP treatment effect by comparing student test score gains in schools that participated in TAP with student test score gains in non-TAP schools" (p. 13) from 2002-03 to 2006-07

school years, Springer et al. found a positive TAP treatment effect on the math scores in elementary schools.

In another study funded by the Bill and Melinda Gates Foundation, Eckert (2010) found the schools that implemented the TAP school reform system had dramatically increased student academic achievement in many school districts across the country. Using a qualitative method, Eckert analyzed the TAP implementation at six different TIF Grant school sites and found 'these sites have preliminary indicators showing increased student achievement, wide stakeholder support, improvements in recruitment and retention, and positive changes in school cultures" (p. 1). For example, the Algiers Charter Schools Association (ACSA) in New Orleans, LA, implemented the TAP for all nine schools in 2005 after the area was hit by Hurricane Katrina. These New Orleans schools have shown academic gain because of the implementation of the TAP in the ACSA Annual Report (ACSA, 2011). In the 2008-2009 school year, seven schools in the ACSA made more than 1 year's growth and one school made a year growth in student academic achievement on the value-added scores. There were 11 charter schools (one elementary, 10 elementary, and middle schools) that implemented the TAP system in Philadelphia, PA where there were 80-100% minority students and 93% of students received free and reduced lunch. After 2 years of implementation, student achievement scores in math and reading increased by more than 12% on the Pennsylvania State Assessment. Moreover, the students of all 11 schools have shown more than 1 year's growth in math and reading value-added scores. In Texas TAP, 67% of students were eligible for free and reduced lunch and more than 60% of the students were English

Language Learners with limited English proficiency. It was stated that the average student achievement gains for Texas TAP schools were above one year's expected growth. Moreover, 20 of the 36 Texas TAP schools achieved 5s on the value-added scores (over two standard errors above a year's growth). Eighty-five percent of the students in rural and urban TAP schools across the state of South Carolina received free and reduced lunch. The association between the TAP implementation and student achievement measured as AYP in these schools was as evident and as likely as any other relationship operating to explain such improvement without the benefit of any direct controls, such as a comparative research design using control groups who did not use the entire TAP Model: 93% of the schools using the TAP Model achieved at least one year's value-added scores, and there were 13% more TAP schools that made AYP than the comparison schools after the TAP implementation (Eckert, 2010).

Although there has been documented literature proving the effectiveness of the TAP framework at schools in high poverty urban areas (Ecker, 2010; Eckert 2013; Hudson, 2010; NIET, 2010; Springer et al., 2008), little research has been done to investigate the effectiveness of the TAP framework on rural, Native American reservations. This study will serve to help fill the gap in research and give information about the implementation of the TAP framework in a geographically isolated, Native American community.

The Four Elements of the TAP Framework

The TAP framework consists of four different components: multiple career paths, performance-based compensation, on-going applied professional growth, and

instructionally focused accountability. Each TAP element has been supported by its own theoretical framework. Based on the career advancement, shared leadership, professional learning community, peer coaching and collegial collaboration frameworks, the four elements of the TAP system concerted together to increase the effectiveness of teachers and to improve student achievement (NIET, 2010). The higher TAP performing schools implemented all four components of the TAP Framework (NIET, 2011).

Multiple career paths. The TAP framework provides opportunities and incentives for teachers to advance to mentor teacher and master teacher positions based on their performance, knowledge, and skills. Working alongside the school principal, both mentor teachers and master teachers take on additional authority and responsibilities for setting specific annual student learning goals based on student data. They work together to help teachers improve their instructional strategies in the classrooms. The members of the TAP Leadership Team share the responsibility as instructional leaders with the principal at the school site. Based on the shared leadership framework, Lambert (2006) stated that the school administrator needs substantial participation from other educators who serve as instructional leaders for the entire school and it is important to develop leadership capacity in the school community.

Shared leadership, often used interchangeably with distributed leadership, expands teachers' participation in the leadership roles and decision-making tasks. Its positive impact on school improvement and student achievement has been supported by different researchers such as Bergman, Rentsch, Small, Davenport, and Bergman (2012), Heck and Hallinger (2009), Leech and Fulton (2008), Leithwood, Harris, and Hopkins

(2008), and Nappi (2014). Bergman et al. employed a simulation experimental design to investigate shared leadership process and confirmed that shared leadership is beneficial to team functioning in general. In a comprehensive literature review, Leithwood et al. examined the studies on school leadership and student achievement. They summarized that distributed leadership had a significant effect on teachers' commitment, motivation, and the environment they worked in. Because teacher's commitment, motivation, and working environment are highly associated with student achievement, the distributed school leadership has an indirect effect on student achievement (Leithwood et al., 2008). As Nappi pointed out, "School and student success are more likely to occur when distributed or shared leadership is practiced" (p. 29).

However, some earlier researchers suggested shared leadership only had limited impact on student achievement (Marks & Louis, 1997; Smylie, Conley, & Marks, 2002). A research literature review done by Appalachia Educational Laboratory (AEL) at Edvantia (2005) showed inconclusive results of the impact shared leadership had on students' achievement. By examining the empirical evidence on school based management, teacher leadership, distributed leadership, and shared leadership, AEL at Edvantia concluded that the inconclusive result was caused by the inconsistent implementation of the shared leadership at schools. Lindahl (2008) suggested the traditional K-12 hierarchical school leadership was the main cause for any failed shared leadership attempt. However, with the built-in structure of the leadership team of the TAP framework, teachers share the decisions about the school improvement issues. As a result, all teachers embrace and own the decisions they make, and most importantly, are

responsible for the implementation of the decisions in their classrooms. Heck and Hallinger (2009) used a 4-year longitudinal study and multilevel latent change analysis to examine the effect of distributed leadership on student math academic achievement; they found distributed leadership had a significant effect on school improvement and an indirect effect on students' math academic achievement scores. It is this kind of sustainable school improvement which makes an indirect influence on student achievement.

On-going applied professional growth (OAPG). The TAP model changes the view of professional development for teachers. It restructures the teacher professional development as an on-going, job-embedded, and collaborative team effort to meet the identified needs of students and to improve the instructional strategies of teachers. In TAP schools, OAPG is the time structured in the school schedule and set aside for teacher learning, which is always "focused on increasing student learning and aligned to the school plan" (NIET, 2006, p.14). The processes of TAP OAPG include a cluster group meeting, an individual growth plan (IGP), and classroom-based support from the mentor teacher or the master teacher. The support from the mentor and master teacher can be in the form of classroom observation, conferencing, team teaching or modeling of a specific lesson in the classroom, all of which follow the steps for effective learning used to guide teachers' learning.

The five steps of effective learning are defined as the steps to ensure the data driven and research-based learning for teachers and students (NIET, 2006). These steps include setting goals for improvement based on the analysis of various student data,

identifying effective and research-based learning strategies that address the goals, teachers working collaboratively to develop their own educational practices based on the research based strategies, teachers implementing the new instructional strategies in the classroom, and teachers evaluating the effectiveness of the new implemented learning strategies on the evidence collected from student work (NIET, 2006).

Centered on collegial collaboration, as well as student focused learning and teaching, this OAPG component of the TAP model is supported by multiple studies (NIET, 2006; Pogodzinski, Youngs, & Frank, 2013; Vescio, Ross, & Adam, 2008). Pogodzinski et al. (2013) conducted a quantitative survey and suggested that novice teachers were more likely to stay in the same school if they perceived the collegial climate was positive and if the collegial climate was a good fit for them. A review of research done by Vescio et al. (2008) examined the impact of professional learning communities on teaching practice and student learning. According to Vescio et al., a learning community professional development model can have positive impact on both teachers and students as long as the focus of the professional learning community (PLC) is to develop "teachers' 'Knowledge of Practice' around the issue of student learning" (p. 88). In other words, only when the focus of the PLC is centered on the issues of how to improve and enhance the learning of students in the classroom, can the PLC make an impact on the learning for teachers and students. For example, DuFour, DuFour, and Eaker (2008) defined a PLC as "educators committed to working collaboratively in on-going processes of collective inquiry and action research to achieve better results for the students they serve" (p. 14). Through highly functioning PLCs, the districts and schools

can build a culture of collegial collaboration to support a culture of learning for everyone, both students and teachers (Dufour & Fullan, 2013). Similarly, the required weekly cluster group meeting from the TAP model creates the opportunities for teachers to work collaboratively and to discuss the effective instructional strategies for improving and enhancing student learning in the classroom. This on-going practice is indirectly associated with increased student achievement as stated by the researchers (Dufour et al., 2008; Dufour & Fullan, 2013; Vesco et al., 2008).

Another component of the on-going professional growth is to provide opportunities for individual teacher's growth and on-going classroom-based support through peer coaching. Per the TAP Foundation (2010), the opportunities provided through peer coaching can be in the forms of "team teaching, conducting classroom demonstration lessons …giving regular feedback on specific teaching and learning innovations, evaluations, and post-conferences" (p. 12). Upon reviewing the literature of peer coaching, researchers believe the collaborative and reflective process of peer coaching is an effective way to develop teachers' professional content knowledge and to aid implementation of teaching models and instructional strategies, especially in the field of science, math, and higher education (Jang & Sung, 2009; McLeod & Steinert, 2009; Murry, Ma, & Mazur, 2008; Rice, 2012). Applying a qualitative method, Musanti (2004) collected and analyzed the interviewing data from three peer supporting teachers in their midteaching career over 18 months. From qualitative data, Musanti could support that her subjects perceived peer coaching as essential to their development. Charteris and Smardon (2014) provided supporting evidence that teachers feel positive and satisfied

about the process of peer coaching. Charteris and Smardon investigated teacher leadership through dialogic peer coaching and because of the data they gained, they suggested that teachers in this study could grow their leadership capacities when they became peer dialogic coaches using collaborative reflective process. Researchers have also supported that teachers could build self and instructional efficacy through the collaborative process (Charteris & Smardon, 2014; Koch, 2014; Murry et al., 2008; Musanti, 2004; Powers, 2014; Rhodes & Fletcher, 2013; Shidler & Fedor, 2010). Using a quantitative survey method and a regression analysis, Koch (2014) found peer coaching provided teacher professional development opportunities which "foster collaboration and collegiality, promote improved instruction, and foster both student and teacher learning" (p. 144). Koch (2014) also found teachers who had a positive peer coaching experience also perceived themselves as effective teachers. However, Murry et al. (2008) found that peer coaching without critical analysis, challenging, or questioning one's classroom practices would not be able to impact student learning outcome.

Instructionally focused accountability. All teachers in TAP schools are required to participate in the instructionally focused evaluation system to ensure high quality instruction in the classroom. Each teacher is evaluated four to six times a year by various certified TAP evaluators against the TAP standards and evaluation rubric, which include four different domains: Instruction, The Learning Environment, Designing and Planning Instruction, and Responsibilities. Each Domain has indicators which demonstrate various areas of teachers' performance in their classrooms. For example, there are 12 indicators under the Instructional Domain (Standards and Objectives,

Motiving Students, Presenting Instructional Content, Lesson Structure and Pacing, Activities and Materials, Questioning, Academic Feedback, Grouping Students, Teacher Content Knowledge, Teacher Knowledge of Students, Thinking, and Problem Solving), four indicators under The Learning Environment (Expectations, Managing Student Behavior, Environment, and Respectful Culture), and three indicators (Instructional Plan, Student Work, and Assessment) under The Designing and Planning of Instruction. Under each indicator there are different descriptors to show different performing levels of teachers. Teachers are rated at five different performance levels from 1 to 5, with 1 as the lowest level and 5 as the highest performing level. The evaluation scores of the teachers play a part in the determination of the teachers' performance-based compensation in the TAP system.

The standards and evaluation rubrics were originally developed by the Milken Family Foundation with research focusing on best practices in learning and instruction (Danielson, 1996; Odden, Milanowski, & Youngs, 1998; Schacter et al., 2004). Over more than 10 years from its first implementation, the TAP evaluation rubric has been validated continuously through a plethora of studies. For example, some researchers substantiated the importance of aligned and coherent standards and learning goals to effective curriculum implementation and student learning (Meece, Anderman, & Anderman,2006; Penuel, Fishman, Gallagher, Korbak, & Lopez-Prado, 2009; Schartz, Wiezman, Fortus, Krajcik, & Reiser, 2008). Rivet and Krajcik (2008) suggested linking the prior knowledge and experiences of students to develop deeper understanding of scientific concepts in middle school. Jussim, Robustelli, and Cain (2009) stated that high

and demanding teacher expectations of students would create the self-fulfilling prophecies in students to confirm the high expectations of the teacher. All these researchers addressed and validated the descriptors of the Standards and Objectives indicator under the Instructional Domain.

Cook (2006), Glen and Dotger (2009), and Low (2008) provided the evidence for teachers using effective instructional strategies to present the content in ways which enhance the learning experience of students, such as the use of visual presentation, metaphors, and analogies. These researchers substantiated the descriptors of the Presenting Instructional Content indicator. Marshall and Horton (2011) observed 102 math and science classrooms in two middle schools to assess the attributes of inquiry-based instruction. They found that students developed deeper understanding of the content and were involved at a higher cognitive level when the teacher provided more opportunities and time for them to explore the concepts and develop the ideas for themselves in the classroom (Marshall & Horton, 2011). The result of this study substantiated multiple indicators on the TAP Rubric under the Instructional Domain such as Motivating Students, Activities and Materials, and Thinking.

Aside from the evidence supporting the rubric in the Instructional Domain, more studies provided supporting evidence to demonstrate the perceived association between the rubric on effective teaching and enhancing student learning in the Designing and Planning Domain and the Learning Environment Domain. Danielson (2013) stated in her Framework of Teaching that congruency in learning outcomes, learning activities and materials and assessment is important to determine the effectiveness of a lesson.

Ginsberg (2005) stressed the necessity for teachers to understand the importance of cultural relevance when designing their lessons to make the lessons personally meaningful for their students. Other researchers (Bui & Fagan, 2013; Roham, 2013; Topple, 2015) believed that culturally responsive teaching is the key to closing the achievement gap for students who are from diverse cultural backgrounds. Researchers also established the importance of incorporating the interests of students in the lesson design to motivate students to learn new concepts and skills (Tsai, Kunter, Lüdtke, Trautwien, & Ryan, 2008). Teachers use assessment data to plan their instruction (Hosp & Ardoin, 2008) and incorporate a fundamental shift to using more embedded formative assessment rather than summative assessment in the classroom (Ayala et al., 2008; Timperley & Parr, 2009). All these studies contributed to the evidence based practices of the TAP rubric under the Designing and Planning Domain.

As for the Learning Environment Domain, many recent studies also provided the evidence to support the rubric indicators under this Domain. For example, the results from the study of Matsumura, Slater, and Crosson (2008) indicated that explicit rules of respectful and prosocial behavior promoted positive classroom climate and student engagement in the learning activity. Other researchers also agreed that a positive school climate was important in establishing successful and effective schools (Koth, Bradshaw, & Leaf, 2008). Allday (2011) suggested six simple strategies for teachers to respond positively to minor inconsequential behaviors to reduce misbehavior of students. In addition, others have stressed the ecological approaches to classroom management and stated that the characteristics of the school physical environment played an important role

in students' behaviors and their mental health (Barowy & Smith, 2008; Evans, Yoo, & Sipple, 2010; Kumar, O'Malley, & Johnston, 2008; Milkie & Warner, 2011; Osher, Bear, Sprague, & Doyle, 2010).

Performance-based compensation. Based on various studies on teacher quality and effectiveness, the compensation mechanism of TAP not only rewards teachers for their classroom performance but also the academic achievement of their students (Malanga, 2001; Milanowski, Odden, & Youngs, 1998; Odden & Clune, 1998). The value-added scores were calculated by the SASEVAAS model, developed by Sanders of the University of Tennessee (Hudson, 2010). Each value-added estimate is converted to a five-point scale. A similar procedure is also used to calculate the school level value-added scores and assigns a score of 1 to 5 to each school based on the student achievement data. A fixed dollar amount of funding, ranging from $2500 to $3000 per teacher, is contributed to a pool of teachers' compensation award. Based on the decision of the school, various pools can be created for teachers with and without teacher value-added scores so that all teachers can qualify for a compensation award whether they teach the tested subject or not (Hudson, 2010).

A typical teacher compensation award, with a teacher value-added score within the pool, is determined by 50% of the teacher evaluation, 30% of the teacher value-added scores, and 20% of the school value-added scores. As for a teacher without the teacher value-added score, the award compensation is determined by 50% of the teacher evaluation scores and 50% of the school value-added scores (Hudson, 2010). Although the teacher value-added scores were the most commonly used method for measuring

student growth (Ehlert, Koedel, Parsons, & Podgursky, 2016) and were viewed to be more influential reform on classroom instruction by some researchers (Goldhaber, 2015; Harris & Herrington, 2015), recent researchers have challenged the stability, reliability, and validity of the value-added measure as the single method to evaluate teacher effectiveness (Berlinger, 2013; Hewitt, 2015; Morgan, Hodge, Trepinski, & Anderson, 2014). These researchers also found the value-added measure further exacerbates the inequality in education because findings show teachers avoid teaching the students who mostly would have difficulties showing student growth, such as ELL students, gifted and talented students, and transient students (Berlinger, 2013, Hewitt, 2015; Morgan et al., 2014).

Upon reviewing the literature on pay-for-performance topic, I found arguments on both sides: either in support of the pay-for-performance or against it. Utilizing a survey study, Woessmann (2011a) examined the 2009 Program for International Student Assessment (PISA) scores and the teacher performance pay survey study provided by the Organization for Economic Co-Operation and Development (OECD). After conducting a test on continental fixed effect and five sensitivity tests on his initial analysis, Woessmann (2011b) still found strong association between teacher performance pay and students' PISA scores. Woesmann concluded that "all other observable things being equal, students in countries with teacher performance pay plans perform at a higher level in math, reading and science" (p.77). A similar study was done by comparing the PISA scores and the teacher salary data provided by OECD from 30 countries. The researchers found that the countries provided a higher average salary for experienced teachers were

likely to have higher national student achievement (Akiba, Chiu, Shimizu, & Liang, 2012). Based on the executive summary report from the Teacher Incentive Fund (TIF) after two years of implementation of the pay-for-performance from various school districts all over the U.S., a small positive association was found on students' reading achievement in these districts.

The same association was observed on the students' math achievement but was not statistically significant (Chiang et al., 2015). However, it is also mentioned that many school districts faced the challenge that they were not able to sustain the pay-for-performance bonuses for teachers. On the other hand, researchers such as Lundström (2012) found upper secondary teachers in Sweden perceived the individual performance related pay (PRP) as "arbitrary, unfair, unclear and felt that it fosters an awkward working environment" (p. 389). Nevertheless, the newly passing ESSA (2015) still supports the pay-for-performance to reward effective teachers based on the academic achievement of their students no matter how indirect this effect may be.

Implications

The design of this study was created to investigate the perceptions teachers had of the TAP model in the school community. The value of the TAP implementation on student achievement and teacher awareness of effective instructional strategies in the classroom may influence the way future students are taught in this specific school milieu. The role that Native American culture plays on the implementation of the TAP in the school could provide valuable information for other schools with similar cultures. Based on the findings of this study, future programs for teacher professional development may

be developed. Such professional development may be tailored to the needs of the teachers and students on the Native American reservation. Further explanation of the research design will be discussed in the methodology section under research design and approach.

Summary

In this section, I discussed the local problem and the broader problem that prompted the study. The rationale, research problems, and the significance of the study were explained. Terms associated with the study were defined. Lastly, a literature review of the theoretical framework underpinning the study, the local problem and its place within the broader problem, as well as the four elements of the TAP framework were included in this section. The methodology of the case study regarding its sampling method, participants, data collection and analysis methods are discussed in the next section. There is discussion with regards to ethical concerns, assumptions, and limitations of the study.

Section 2: The Methodology

Introduction

I used a qualitative case study design to explore the extent of the influence of a Native American culture on the TAP implementation and teachers' implementation experiences. There are documented successes of the TAP system in promoting quality teaching and improving student academic achievement in many different school districts throughout the United States, especially in the high needs schools (NIET, 2012). The problem is that little is known regarding the TAP implementation of an isolated rural school districts under the Native American cultural context. This case study addressed the problem of the gap in both literature and practice of the TAP implementation on a reservation. The justification of the case study research design is described in the research design and approach section below. The guiding research questions were:

RQ1: How do the teachers perceived the four different elements of the TAP?

RQ2*:* To what extent are the experiences of the TAP implementation challenging and rewarding?

RQ3: How does the TAP process change teachers' instructional practices?

RQ4: How does the Native American setting influence the TAP implementation?

The purpose of this study was to discern if teachers perceive the collaborative process involved in the TAP implementation to have an influence on the teachers' instructional practices. These questions helped me gather information about teachers' perceptions of the four elements of the TAP framework and their experiences of the

implementation under the Native American cultural context. Nine teachers were interviewed and observed in their classrooms. I used the information gathered from the interview to find out the most rewarding and challenging experiences of the TAP implementation from the teachers' point of views. The data gathered from the walkthrough observation not only provided me with firsthand information about the TAP implementation in the natural setting and how the changed instructional practices manifested in the classroom, it also helped me corroborate the teacher perception data obtained from the interview. Lesson plans of the walkthrough observations were collected to triangulate the data collected through interviews and walkthrough observations. I planned to use teachers' lesson plans to solidify the findings from the interview and the walk-through observation regarding the teachers' instructional change in the classroom. The results of the study contributed to a design of a professional development for the school district on the reservation

Research Design and Approach

I used a qualitative case study design for my study. I based my decision of the research design on three main reasons. The case is located at the heart of a large Native American reservation in the southwestern region of the United States. With only one state highway running through the school community to connect it to one major Interstate Highway about 125 miles away, the geographically isolated location of this case is the bounded system by space as stated by researchers such as Hancock and Algozzine (2006) and Lodico, Spaulding, and Voegtle (2010). The boundary of the case was confined within the geographic location of the district under the study.

I investigated this topic because of its unique Native American cultural context as emphasized by various researchers (Hancock & Algozzine, 2006; Lodico et al., 2010; Flyvjerg, 2011; Thomas, 2011; Yin, 2009). I used the context-dependent knowledge as my method of learning indicated by Flyvjerk (2011) to conduct the interviews and observations in the natural Native American cultural setting. The information and knowledge obtained from these data collection methods under the natural Native American cultural surroundings in turn provided insights for me to learn about the implications and nuances of the implementation of the TAP on a Native American reservation.

Although I considered the influence of the native culture on the implementation of the TAP, the focus was on the experience of the TAP implementation of the teachers and not on the Native American culture. This study warranted a case study design and not an ethnographic design as Creswell (2008) indicated that "Case study researchers may focus on a program, event, or activity involving individuals rather a group per se" (p. 476). I called for a qualitative focus because I included inquiries in my research questions to gather information on how the teachers' attitudes affect the implementation of the TAP. The study of this case was "more exploratory than confirmatory" (Hancock & Algozzine, 2006, p.16) and I looked for deeper understanding of the views of the teachers through the inductive process as described by Creswell (2008).

Lastly, I used a case study approach because it was the most appropriate method to answer the how research questions as Yin (2009) stated that why and how questions were used in case studies to ask about "a contemporary set of events over which the

investigator has little or no control" (p.13). I did not intend to control any variables in the natural setting because the variables were embedded in the environment for me to uncover through the study (Merriam, 2010).

Hancock and Algozzine (2006) stated that a researcher chooses an intrinsic case study orientation because the researcher wants to gain knowledge about a particular group of people and is not interested "in creating theories or generalizing their findings to broader populations" (p. 32). I was intrinsically interested in the experiences and attitudes of the teachers implementing the TAP framework and I wanted to find out the particulars, such as the interaction among the cultural context, teachers' attitudes and perceptions, and the implementation process of the TAP school reform framework, especially under the Native American cultural context. I did not intend to generalize the results of the findings to a broader population, but rather to explore and to investigate the most challenging and rewarding experiences of the TAP implementation for teachers.

It was my intent to provide insights gained from this study to showcase that positive social change occurred through the process of the implementation. I believed that the combination of collegial collaboration among teachers and the self-reflection of the teachers' daily instructional practices based on the TAP instructional rubrics were a few reasons that change the practice of teaching in isolation in general and result in increasing student achievement on the Native American reservation.

Participants

Setting and Sampling Method

The geographically isolated school community is in the Southwest on a desert of 5,500 feet of elevation. One state highway runs through the school community and connects it to other outlying communities. It is reported on the webpage of the district that the school buses from this district travel over 5,200 total miles each day transporting students.

The location of the said school district is in the heart of a Native American reservation where 97% of the student population is Native American. There are seven schools in the district, which include three K-6 schools, one junior high school, one high school, and two outlying K-8 schools. These seven schools serve over 4,000 students from the local community and the communities from the outlying areas. Based on the information from the school website, the school district is the largest school district on the specific Native American reservation in both student count and geographic area. Because of the high poverty population, all students in the district receive free or reduced lunch through the Federal Food Program and all schools are labeled as Title One schools (de la Garza, 2011).

As described in the problem section, before implementing the TAP comprehensive school reform program, the school superintendent asked the teaching staff from all seven schools for the vote of approval to ensure the mass support from the teachers for the implementation. Although the result of the average teacher's vote from all schools in the district was 76%, it was indicated that some schools were more

supportive of the implementation than the others. To find out if the teachers' initial attitude toward the TAP would make any difference in the experiences of the implementation for teachers, I used maximum (or maximal; Creswell, 2008) variation sampling of the qualitative purposeful sampling methods as described in Lodico et al., (2010), Creswell (2008), and Marshall and Rossman (2011). Maximum variation sampling is the sampling strategy which allows researchers to collect data from individuals with different characteristics to build complexity of the study.

In this case, the in-depth information was collected from the teachers from five different schools, which included the responses from the participants from one K-8 school, two K-6 schools, one junior high school, and one high school. Through maximum variation sampling, I identified the common patterns through many different perspectives (Creswell, 2008; Marshall & Rossman, 2011). By using the maximum variation sampling method, I provided information for comparison to determine if teachers' initial attitudes they had about the TAP would influence their experiences of the implementation of the program to the RQ 1: How did teachers perceive the four elements of the TAP framework initially (Appendix B)? In addition, the responses from the participants can be used to address the RQ 2 (To what extent were the experiences of the implementation of the TAP framework challenging and rewarding to the teachers involved?) as well as the RQ 3, How does the TAP process change teachers' instructional practices in the classroom?

Justification and Criteria for Participant Selection

Originally, I planned to select two participants from six different schools, total of 12 participants, from the district. However, one participant withdrew from the study during the data collection process and I was not able to select any participant from one of the outlying K-8 schools because no teachers at the school met the criteria of living in the local vicinity where the district office located. After I reported the difficulty to the Walden IRB and the tribal IRB, I was approved with the change from 12 participants to 9 participants for my study. With this change, at least one participant was selected from each school. Effort was made to include both Native American and Non-Native American teachers for the in-depth interview, however, gender was not a factor related to the participation of the study. As Patton (2002) indicated, "Qualitative inquiry typically focuses in depth on relatively small samples, even single cases (n=1), selected purposefully" (p.273). Thomas (2011) mirrored the same notion by saying case study was "a kind of research that concentrates on one thing, looking at it in detail, not seeking to generalize from it" (p.3). By purposefully selecting information-rich participants, one can obtain a great deal of important information about the topic essential to the purpose of the study (Palinkas et al 2015).

I used two criteria for selecting my participants. One was to choose the information-rich participants who were with the district since the very beginning of the TAP implementation. Another was that I only chose the teachers who lived within the boundary of the local tribal government where the resolution letter was obtained and the school district office was located.

Procedures for Gaining Access to Participants

To gain access to the participants, I submitted a copy of my proposal to the school superintendent for a Letter of Cooperation for conducting the study. The school superintendent serves as the gatekeepers as stated by Creswell (2008). With the permission of the school superintendent, I proceeded with my IRB application at the Walden University. After receiving the IRB approval (Approval Number 3-18-150175952) from Walden, I moved on to the local tribal government for resolution letter to start the tribal IRB application process. I informed the superintendent and all the principals involved after receiving the approval letter (approval no. NN-15-209) from the tribal IRB and started the data collection process. With their permissions, I met with the teachers at each school and started the data collection process at each school site. No data was collected until the teacher signed the research study consent form and agreed to participate in the study.

Establishing Participant-Researcher Relationship

During the meeting with teachers, a short introduction of the study and a research consent form were handed out to the potential participating teachers to inform teachers of the purpose of the study and for their consents to be part of the study (Appendix C). I talked with the potential participants and guaranteed their confidentiality if they chose to participate in the study. I reiterated the rights as a participant to the teacher after the research consent form was obtained and informed the participant of the measures taken to ensure their anonymity, such as there would be no identifiers on the transcripts,

observational protocols, and submitted lesson plans. I respected teacher's decision when one teacher decided to withdrew from my study and thanked him for being involved.

I set up all the walkthrough observations with the participants ahead of time to build a trusting and respectful relationship with the participants. When teachers decided to change their appointments to a different time due to any unforeseen situation, I always accommodated their requests. After transcribing the interview, I showed each participant the transcript to check for the accuracy of the transcript.

Measures for the Protection of Participants' Rights

Before I submitted the IRB application, I completed a web-based training course, Protecting Human Research Participants, from the National Institute of Health. I was informed of the importance of safeguarding the rights of participants in my study through this course. Merriam (2010) stated that most ethical dilemma emerged during the data collection process and the dissemination of the finding. In this study, I took steps to consider research ethics to prevent and find ways to deal with the dilemma should it occur. First and foremost, "protecting them (participants) from harm" (p. 147) was upheld by ensuring the confidentiality of the participants (Lodico et al., 2010). For example, although the principal allowed the access for me to meet with the teacher participants, I was very conscious about keeping the confidentiality of teachers who participated in the study. The principal was not aware as to which teacher signed the study consent form unless the teacher willingly informed the principal about his/her participation.

A study research consent form was signed by each participant (Appendix C) before I started collecting data from the teachers. The consent form included information such as the purpose of the study, procedures, voluntary nature of the study, risk and benefits of being in the study, compensation, and confidentiality. I gave a copy of the signed consent form to the teacher. In the consent form, the contact information of researcher and doctoral committee chair were shared with the participants and they understood that they were free to withdraw from the study at any time.

Once a teacher signed the research study consent form, a case number was assigned to the consent form immediately. I used the same number as the identifier for all corresponding documents, such as interview transcript, observational protocol, and lesson plan submitted by the teacher throughout the data collection and analysis process to protect the anonymity of the participant. All signed research study consent forms by the participants are kept at a different location and will be disposed of by me after five years.

Participant Information

All nine participants work within the school district boundary and have similar student population. Table 1shows the demographic description of each participant in the study.

Table 1

Descriptions of Participating Teachers and Their Schools

Participant	Years of experiences	Native American	K-6 school	K-8 school	Junior High	High School
1	6	X	X			
2	14	X		X		
3	8	X				X
4	12			X		
5	29		X			
6	23		X			
7	32	X			X	
8	15				X	
9	5					X

Participant 1. Participant 1 had 6 years of full time teaching experiences at the time of the interview. She attended the TAP New Teacher Academy for 3 years when the TAP was first implemented in the school district. She stated the TAP New Teacher Academy helped her become better at implementing the TAP instructional rubric in her classroom. The school of Participant 1 is a K-6 school located at the edge of a cluster of the district schools about 17 miles away from the district administration office. The participant taught 6th grade and was in a Master's program seeking a degree in Bilingual and Multicultural Education at the time of the interview. She is a Native American teacher who speaks fluent Native language.

Participant 2. Participant 2 worked at an outlying K-8 school of the school district located at another rural community about 38.8 miles away from the district administration office. The female teacher has 14 years of teaching experiences. She originally worked at the high school and was transferred to the current school to be in a leadership position 2 years ago. The teacher is a Native American teacher who also

speaks fluent Native language.

Participant 3. The female Native American teacher speaks fluent Native language. She worked at the high school and moved through the TAP Multiple Career Paths as a career teacher, mentor teacher, and an academic coach at the school. She aspired to become a principal and work on her master's degree in Educational Leadership. The participant has been in the field of education for about 8 years. The high school is located about 16 miles away from the district administration office.

Participant 4. The female participant teacher is a non-Native American teacher. She has worked for the district for about 12 years and has gone through several transfers within the district from the high school to the junior high then to the current K-8 school, which is the same K-8 school as Participant 2. She was working on her Reading Specialist endorsement at the time of the interview.

Participant 5. The female non-Native American teacher was the lead teacher at her school. She graduated from the local school district system and had been working for the district her entire career for about 29 years. She worked at the same K-6 school as the Participant 1 teacher.

Participant 6. The teacher of Participant 6 worked at a different K-6 school than Participant 1 and Participant 5 within the district. She had been in the district for about 23 years and was not interested in becoming a mentor teacher. The participating teacher stated that she enjoyed being a teacher and did not want to be a mentor teacher. She stated that she would not leave her students to a substitute teacher to perform her extra duties as a mentor teacher, such as conducting walkthrough observation or providing

supports in her mentees' classrooms. She is a non-Native American teacher.

Participant 7. The male Native American teacher had been in the field of education for almost 32 years. He had been a mentor teacher on and off over the past few years at his school site and stated that he did not like the amount of the paperwork he had to do for the position. The school of this case is the junior high school of the district, which is located at the center of the three K-6 schools of district.

Participant 8. The participating teacher worked at the same school as Participant 7 at the time of the interview. He is a non-Native American teacher; however, he is married to a Native American woman. He has been with the district for about 14 years. He started out as a high school teacher and was transferred to the junior high school 12 years ago.

Participant 9. The male teacher worked at the high school at the time of the interview. He started teaching the same time as the TAP implementation at the school district. He has worked as a career teacher and moved on to the mentor position for a year. He was transferred to the high school after one year of leave of absence due to a personal reason. He is a non-Native American teacher and has a Native American spouse.

Data Collection

Justification of Data Collection Method

The data of this study were collected through the natural Native American cultural context from multiple sources (see Hancock & Algozzine, 2006; Yin, 2009; Lodico et al., 2010). The data collection process lasted for eight months due to the dynamic nature of

the school setting. The methods of data collection were one-on-one individual interviews, walkthrough observations, and teachers' lesson plans. The qualitative data from the interviews was triangulated with the data from the observations and document analysis, such as the analysis from teachers' lesson plans. Triangulation was the method I used to validate my findings as described in Lodico et al. (2010), and Marshall and Rossman (2011). As researchers stated interviews, observations, and document analysis are the primary sources of data in qualitative research (Creswell, 2008; Kvale & Brinkmann, 2009, 2014; Merriam, 2010).

In-depth Interview

Kvale and Brinkmann (2009) defined the research interview as "an inter-change of views between two persons conversing about a theme of mutual interest" (p.2). Through human interactions, researchers can produce knowledge that is both "everyday knowledge and systematically tested knowledge" (p.2). I scheduled the initial interview with participant teachers and showed them the interview transcripts after the initial interviews to clarify questions raised from the data because the argument made by Marshall and Rossmann (2011) stated that "the richness of an interview is heavily dependent on these follow-up questions" (p.144).

Merriam (2010) stated that useful data can only be obtained through good interviewing questions. Good interviewing questions are open ended and can generate both information and opinion about the topic investigated from the participants (Merriam, 2010). I decided to use semi-structured interview as the method for me to collect the data from the interview. A semistructured interview allows more flexibilities for the

participants to answer the research questions within the parameter of the questions. Whiting (2008) specified that semi-structured interview questions were generally "organized around a set of predetermined questions" (p.36). With the open-ended guiding and semi-structured questions (Appendix B), the participants responded to the questions freely based on their experiences. I collected the research question responses from the participants. The interviews were audio taped and transcribed by me for data analysis. All audio recordings were erased after participants confirmed the accuracy of the interview transcripts.

The in-depth interview was designed as the main source of information to answer all the guiding research questions. These guiding questions could help me explore and investigate teachers' TAP implementation experiences. Through the responses from the teacher participants, I wanted to find out if the teacher collaboration process through the TAP implementation had an influence on the change of instructional strategies in the classroom.

Walkthrough Observation

Merriam (2010) stated that observation could be used as a tool for researchers "when it is systematic, when it addresses a specific question, and when it is subject to the checks and balances in producing trustworthy results" (p.118). I used the observation to triangulate and validate the emerging findings from other sources of information, such as interviews and document analysis (teachers' lesson plans). The observation allowed me to obtain firsthand information of teachers implementing the TAP framework in the natural setting.

The observations took place at each school twice after the in-depth interview with the participants. I developed the observational protocol (Appendix D) based on Downey's walkthrough model, which was a method to gather snapshots of classroom information through focused observation (Downey, Steffy, Poston, Jr., & English, 2010). After obtaining the permission from Downey to use her walk-through model for my study, I modified the structure from 3 minutes into a 10 to15 minute observational protocol. Downey's (2010) walkthrough model mainly focused on student engagement, curriculum alignment, teacher's instructional practices in the classroom, the learning environment, as well as any safety issues observed in the classroom. The structure of the walkthrough protocol conforms to the observation criteria from Merriam (2010). Per Merriam, researchers should consider to note the physical setting, participants, activities and interactions, conversations, and subtle factors while conducting an observation in the field. I took field notes under each category on the Observational Protocol (Appendix D) and used the information gathered from the observations as reference points to triangulate with the interview data.

The data collected from walkthrough observation was utilized to answer the RQ 3. Based on the field notes of the classroom walk-through observations, I could confirm and follow up on the responses provided from teacher participants through the interview. I observed the connection between the TAP implementation and the instructional practices firsthand in teachers' classrooms.

Lesson Planning Documents

In addition to individual interviews and observations, data collected were triangulated with the lesson plans submitted from the teachers. Through these multiple sources of information, I had an in-depth analysis of the investigation to answer the research questions, such as how teachers experienced the implementation of the TAP framework and how the learning in the cluster group meeting transcended to classroom practices.

Data Collection Processes

I did not start the data collection process until I received the approval of my proposal from both Walden IRB and tribal IRB. After I received the confirmation of the approval, I approached the school principals of two K-8 school, two K-6 schools, one junior high school, and one high school to gain access to the potential teacher participants at each school site. The data of my study were generated from the teacher participants' responses, as well as from the walk-through observations. After the teachers completed and returned the Research Study Consent Form back to me, I contacted teachers for the in-depth interview at a location they chose. Once the in-depth interview was completed, I started to transcribe the audio taped interview. I scheduled the appointments with teachers for walkthrough observation in their classrooms. After the walkthrough observation, I discussed the transcript and my field notes from the walkthrough observation with the participants for accuracy and inputs.

System for Keeping Track of Data

I kept a system for keeping track of my data collection process. For example, I

kept a calendar of all the activities with regards to my study. I later transferred the activities on my calendar into the work journal on my semester plan to keep track of the progress of my study. The interview data were first recorded on a digital recorder and were transcribed and saved on a USB drive with a case number. I also used the same case number as the identifier for walkthrough observation field notes from the same participant so the real name of the participant would not be revealed. The audio recordings of the interview were deleted from the digital recorder after participants had a chance to review the transcripts and to give me feedback on the transcripts. All transcripts and walkthrough observation field notes related to my study were save on the same USB drive. I kept a notebook to write down any thoughts I had during the data collection and analysis process and referred to the notebook as I composed my paper. The work journal, my notebook, the signed consent forms, and the USB drive are kept in a locked file cabinet at a location about three hours' drive away from the research site. They will remain in the locked file cabinet for five years and be destroyed after the time expires.

Procedures for Gaining Access to Participants

Before I started the data collection process, I made sure the IRB approval from Walden University and tribal government were obtained. I informed the school superintendent, as well as the principals, with the approval letters and the Research Study Consent Form to ask for the access to potential participant teachers. With their permission, I met with the teachers at each school and started the data collection process after I was granted the access to the teachers at each school site. No data were collected

until the teacher signed the research study consent form and agreed to participate in the study.

Researcher's Role

I have been working in the district for over 15 years as a teacher and an academic coach through elementary school and high school. I have been on various district committees for aligning district K-8 English and Language Arts curriculum, leadership, and strategic planning. I could connect with other teachers in the district to build rapport and trusting relationship through these opportunities. With the background and experience I had in the district, I assumed that any teacher who was willing to participate in my study would have responded to my interview questions truthfully.

I took the "traveler" stance (Marshall & Rossman, 2011, p.143) as an interviewer and conducted dialogic interviews because I planned to generate the new meaning of the topic studied and co-constructing the knowledge along with my participants. The traveler stance allowed me to explore teachers' experiences from the participants' point of views so I could keep my own bias to the minimum. The member-checking process with the participants could also keep my own bias at bay. My role in the observational process was observer as participant (Merriam, 2010). After the initial interview and member-checking of the interview transcript, I established the trust through these previous meetings and was viewed as an insider by the participant. The participant understood my primary role was one of observer and information gatherer rather than a participant of the class. A wide range of information was obtained with my peripheral membership role in this study as described by Merriam (2010).

I was aware that my own bias might get in the way of my interpretations of the data. For example, I might have prior knowledge of certain teachers' classroom performances and their attitudes about the TAP program. I might have expected certain responses from the teachers and might have misinterpreted their responses during the data analysis process. However, these concerns were addressed by peer debriefing, member checking, and richly detailed descriptions to ensure the accuracy and dependability of the data. For peer debriefing, I met with a few doctoral students on and off to examine my field notes and assumptions and to ask for a different perspective on the interpretation of the data. I also used member checking to ensure the accuracy of my interpretations by showing participants the interview transcriptions and observational protocol for feedback. The richly detailed description was the way for me to seize the intricacies of the interactions of the participants and the Native American cultural context.

Data Analysis

Data Analysis Method

I used a Computer Assisted Qualitative Data Analysis Software (CAQAS) named Alas.ti and constant comparative method to analyze the data collected from the interviews, walkthrough observations and lesson plans. The data analysis and collection process were conducted simultaneously, which means I analyzed the transcript after each interview. This was appropriate because I could respond to the emergent, cursive, and dynamic characteristics of the qualitative data as described in Merriam (2010). All transcripts from the interviews and field notes of the walkthrough observation were entered into the CAQAS Atlas-ti to keep track of the data. All paper documents were

scanned into digital copies and all digital files were kept on a USB drive. The interview transcripts were first coded using simultaneous coding method because two or more different codes were found to be linked to the same quote. Pattern coding method was used as the second coding method to find common thematic categories (Saldana, 2016). After the second coding, 10 categorical themes were developed using the frequency report (Glesne, 2011; Lodico et al., 2010). The interview data were the main source of the data for this study and were used to answer all four research questions. The same coding method was applied to the information collected from walkthrough observation. The thematic categories were developed from the coding method as well. The walkthrough observation data were mainly used to answer the RQ 3 and RQ 4. Lesson planning documents were used to corroborate the data from the interview as well as the walkthrough observation and to answer the RQ3 and RQ 4.

Accuracy and Credibility of Data Analysis

Triangulation was the method I used to validate my findings as described in Lodico et al. (2010) and Marshall and Rossman (2011). Researchers consider interviews, observations, and document analysis are the primary sources of data in qualitative research (Creswell, 2008; Kvale & Brinkmann, 2009, 2015; Merriam, 2010). When teachers signed the consent form, they agreed to provide their lesson plans for data triangulation (Appendix C). However, only six teachers submitted their lesson plans to me.

There were measures taken to ensure the dependability and credibility of the findings. For example, member-checking was conducted after I completed transcribing

the interview data and the field notes of the walkthrough observation. Triangulation, using the walkthrough data and documentation collected through lesson plans, was used to confirm and verify the interview data. I included both the expected and unexpected findings in my report and I chose to describe the discrepant cases clearly to ensure that I have an unbiased report (Glesne, 2011).

Procedures for Dealing with Discrepant Cases

For the discrepant cases, I decided to follow the same procedures as for all other participants. I transcribed the interview and coded the transcripts and the walkthrough observation fieldnotes the same way as I did for other participants. I included detailed descriptions of the discrepant cases in the results section to maintain an unbiased analysis of the data.

Data Analysis Results

In this section, I used tables and detailed descriptions to report my data analysis results, which included the types of data collected from each participant, the information gathered from each participant from interview, walkthrough observation, and lesson plan.

Types of Data Collected

I used three different sources to collect the data from each participant. Table 2 contains the information about the types of data I gathered from each participant.

Table 2

Documentation Collected for the Study

Participant	Semi-Structure Interview Transcript	Walkthrough Observational Protocol Field Note	Lesson Plan
1	X	X	X
2	X	X	X
3	X	X	X
4	X	X	
5	X	X	X
6	X	X	
7	X	X	X
8	X	X	X
9	X	X	

The lesson plans were collected from six of the participants. Participants 4, 5, and 9 were unable to submit their lesson plans to me after several reminders through phone and email communications.

Data Analysis Results of In-Depth Interview

The in-depth interview was recorded on a digital recorder. The audio recording was then transcribed into a Word document, transferred into a PDF file, and stored in the CAQDAS program. After each participant gave feedback on the interviewing transcript, the audio recording was deleted. The transcripts were analyzed through simultaneous coding first and pattern coding later using the CAQDAS program. There are 56 codes applied to the interview transcripts. The high frequency codes analysis through the CAQDAS is shown in Figure 3.

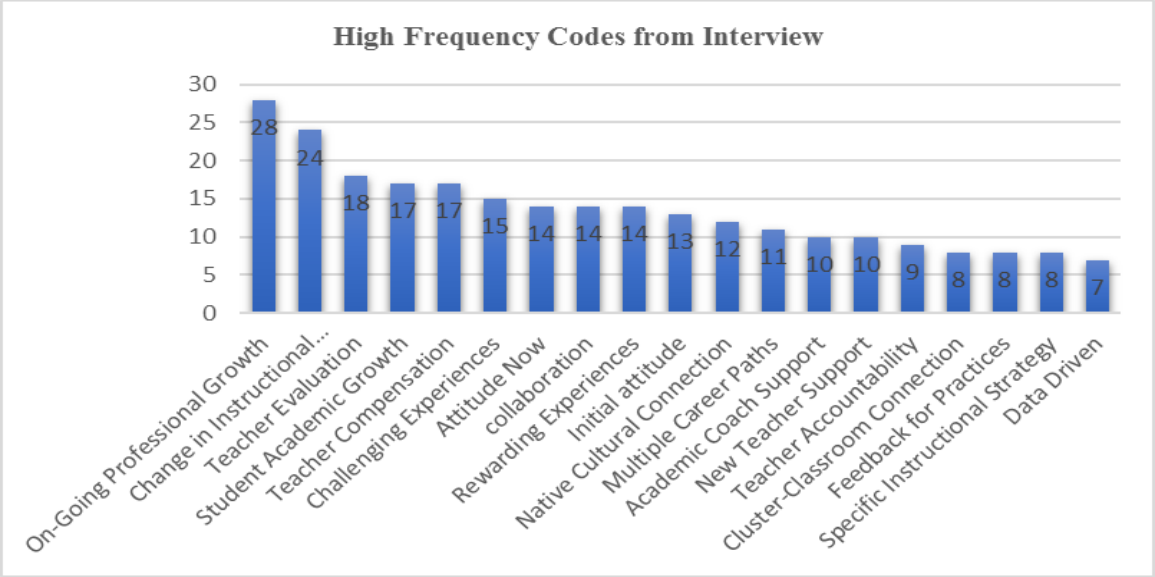

Figure 3: High frequency codes from in-depth interview.

The semistructure interview was designed to answer all four research questions (Appendix B). The research questions and the corresponding questions from the semi-structured interview questions are shown in Table 3.

Table 3

Semi-structured Interview Question Justification

Research question addressed	Semi-structured in-depth interview question
1. How do teachers perceive the four different elements of the TAP Framework?	Tell me about your initial attitude about the TAP framework? (Prompt: Were you in support of the implementation? Why or why not?) Tell me about your attitude now about the TAP framework. In your own words, tell me about your understanding of the four elements of the TAP framework. (Prompt: Multiple Career Path, On-going Applied Professional Growth, Instructional Focus Accountability, and Performance Based Compensation). The TAP founder, Milken, once said that it was essential to implement all four elements of the TAP to ensure the student achievement, what is your opinion on that? (Prompt: If not, which one of the elements do you agree with the most? Why? Which one do you disagree with the most? Why?)
2. To what extend were the experiences of the implementation of the TAP Framework challenging and/or rewarding to the teachers involved?	Tell me about your most rewarding experiences you had in implementing the TAP process. Tell me about your most challenging experiences you had in implementing the TAP process. What kind of preparation need to be done to make the implementation less challenging for you?
3. How does the TAP process change teachers' instructional practices in the classroom?	Reflect on your instructional practices since the implementation of the TAP, have you noticed any difference in your own classroom? Reflect on the turning point of the change in practices.
4. How does the Native American cultural setting influence the implementation of the TAP Framework?	In your opinion, how does the Native Culture impact the process of the TAP implementation?

Interview Question Responses Related to Research Questions

Research Question 1: How did teachers perceive the four different elements of the TAP framework? I summarized the participant's responses from the interview script based on each part of the research question. There are six different parts of the questions and the participants' responses to these questions were organized in six different tables. The responses and correspondent codes with regards to teachers' initial attitudes and their attitudes now are included in Table 4.

Table 4

Interview Data Analysis Question 1-Teacher's Attitudes Toward TAP

Interview question 1 summarized responses-Teachers' attitudes toward TAP	Thematic Coding
P2: I was a strong advocate for it. P3: I liked it. I thought it was positive. P5: I thought it would be a helpful tool for us. P6: When it was first introduced, it was a lot more fun. I felt we had more time to complete tasks. People were really there to help you. P8: My initial attitude about the TAP was positive.	Positive initial attitude
P7: Initially, there were some resistant on my part. P9: I was doubtful.	Negative initial attitude
P1: I had mixed-feeling about it.	Mixed feeling initially
P1: My attitude now? I like it. P2: For the past four years, my attitude toward TAP has been very positive because it allows me to see my personal growth and see the academic growth of my students. P3: I am taking classes through NAU, and I am noticing the framework TAP provides is ahead of some of the other schools. P4: I feel much more comfortable now than I did two years ago. To me it is more relevant now. P5: I totally embrace the TAP framework now. I have seen it worked and I have seen it helped teachers grow. So yeah, I am still a cheer leader. P8: I was able to gradually increase my SKR scores over the year, and I also saw my students' scores going up. So I am very positive about the TAP. P9: However, my attitude changed as the time moved on. Especially after I became a mentor teacher, I started to see the benefit of the TAP because I developed deeper understanding of the program.	Attitude now-positive
P6: Now it's more stressful because I have to take homework home to do TAP thing out of class.	Attitude now-more stressful
P7: I don't know, I go back and forth. There are times I think the TAP makes you focus on certain things, but then again,…it (teacher evaluation) is hard.	Attitude now-mixed

It became clear that although the nine participants reported different initial attitudes toward the TAP framework, two participants (Participant 1 and Participant 4) reportedly had an attitude change toward the framework after four years of implementation from mixed and doubtful to positive. One participant changed his attitude from resistant initially to positive at times after the implementation. Participant 6 reported an initial positive attitude toward the TAP and felt stressed out lately because of other district initiative (Beyond Textbook implementation) and inconsistent school leadership.

Participant 4 changed her attitude to feeling positive about the program after she finally made the connection between the learning in the cluster group meeting and her classroom instruction. She reported feeling disconnected from the cluster learning initially, but felt "much more comfortable now" than she felt two years ago. "To me it is more relevant because now I can see where this is going" said Participant 4. Like many of her colleagues at the time, she saw everything coming out from the meeting was just another task added to her already busy schedule and another mandate that she had to do in her classroom. Not until after transferring to another school did she finally see how the learning from cluster group meetings connected her to her classroom instruction. By implementing these strategies learned from the cluster, she actually saw the growth in student academic achievement scores when analyzing the data of her own students. She attributed the results to the ability of her academic coach to deliver the content of the cluster in a way that finally made sense to her.

Participant 7 was resistant at the beginning. However, after the implementation,

he felt the TAP Framework actually helped him maintain his focus on instruction at times. Other times he still felt overwhelmed about the TAP instructional rubric.

There are four components of the TAP framework which consist of Multiple Career Paths, On-going Applied Professional Growth, Instructionally Focused Accountability, and Performance-Based Compensation. I include the responses and corresponding thematic codes from the participants to the Multiple Career Paths of the TAP in Table 5.

Table 5

Interview Data Analysis Question 1-TAP Element of the Multiple Career Paths

Interview question 1 summarized responses-Understand of the Multiple Career Paths	Thematic Code
P1: I enjoy being a teacher and do not want to leave the classroom.	Multiple Career Paths-Not for me
P4: No, no, no! Way too much work! I've watched mentors, I've watched academic coaches. One, I do not want to be away from my classroom. To me, it's not worth it, I want to teach. I want to be with the kids, to see those light bulbs just light up when they get something. And two, I can't stand paperwork. It's not going to happen! No, I don't like paperwork at all!	Multiple Career Paths-Not for me
P6: No, and I wouldn't be (a mentor teacher) because it's too much time out of the classroom. One of my collaborating teacher in 3rd grade is a mentor, and it bothers me because she's missing quality time with her students.	Multiple Career Path-Not for me
P8: I know the multiple career paths is definitely not for me. I enjoy teaching the kids and stay in the classroom with my students. I do not want to leave my classroom. Besides, there is just too much to do as a mentor or (an) academic coach.	Multiple Career Paths-Not for me
P2: I think I have been blessed all the years I have been an academic coach because all the teachers I have worked with are the ones with the TAP program since the very beginning, so they are already very familiar with it.	Multiple-Career Paths-Rewarding experience
P3: The way I see the multiple career paths… would be having the opportunity to have teachers who are doing good things in the classrooms and who are showing a lot of growth in their students to become the leaders to share what they learned to other teachers. It also provides me the opportunity to work in the leadership team where I can apply it toward my leadership program to become a principal.	Multiple Career Paths-Personal growth
P5: Multiple career paths,…teachers can advance through the multiple career paths. You may start as a career teacher, and you may work your way into being a mentor, and eventually up to an academic coach or master teacher. So that's how I see it as an opportunity for teacher to move up. (You) Take on more responsibilities and help your peers.	Multiple Career Paths-Personal growth
P7: I guess from a mentor's perspective, the most rewarding part is actually to be in somebody else's class. For me, I learned more from them for some of the crossed-content areas strategies.	Multiple Career Paths-Personal growth
P9: I really did appreciate the opportunity for me to become a mentor teacher and that was when I started to have a better understanding of how the components of TAP worked together. I had better understanding of the rubric after being a mentor teacher.	Multiple Career Paths-Personal growth

For Multiple Career Paths, Participant 1, Participant 4, Participant 6 and Participant 8 stated that they did not and would not consider to advance their career through the Multiple Career Paths because they enjoyed teaching and helping students in the classroom. However, other participants reported that they experienced tremendous professional growth while being involved in the Multiple Career Paths. The experience of moving through the Multiple Career Paths from a career teacher to a mentor teacher, and eventually becoming an academic coach has inspired Participant 3 to pursue a Master's degree in Educational Leadership.

Reportedly, the most salient component of the TAP framework to teachers was the On-going Applied Professional Growth (Figure 3). The job-embedded cluster group meeting provided a time during the school day for teachers to analyze the student data, learn research-based effective teaching strategy to benefit their classroom instruction, and to collaborate with their colleagues. All teachers have very positive attitudes toward the On-going Applied Professional Growth component. The summary responses and the corresponding thematic codes are included in Table 6.

Table 6

Interview Data Analysis Question 1-TAP Element of the On-Going Professional Growth

Interview question 1 summarized responses-TAP element of the On-Going Professional Growth	Thematic Code
P1: I think for me the most positive thing I got out of it is meeting together as a group, as a grade level, and working with the other teachers. The way I see it is the time we get together with other teachers for the professional development to get help with things that we need. I like to get that extra help.	Cluster group meeting
P1: It's like the academic coaches had already targeted the area we need to work on. That was helpful for me.	Academic coach support
P1: Actually, taking what we are learning in the cluster room back to our own classroom, and having that feedback from the academic coaches and having them as resources is beneficial.	Academic coach support, feedback for practices, cluster-classroom connection
P3: The professional growth, it is important for us to keep growing. With our teachers, the types of the professional development that we provide for them, it needs to be applicable to them. It has to be something they are willing to try in their classroom and it can be used any time to help grow their students.	Academic coach support, cluster classroom connection
P2: Well, the first element is to have the professional growth… you know how to grow with the cluster meeting and having standards rolled out.	Cluster group meeting
P4: Professional growth, that's TAP meetings. When I go to TAP meeting, I was like, oh, this is interesting, oh, and I didn't know that, oh, I learned something.	Cluster group meeting
P5: That is all about the cluster, on-going professional growth. We do that every week in cluster. We use the data to say this is an area that needs work. That is what we do in cluster, is we provide the professional development to take the data and move it to a higher level.	Cluster group meeting
P6: As far as for embedded training, I think that is great professional development. We get that once a week and it pushes me to read new literature, think off the new ideas, collaborate with my peers, so I think that component of the TAP is really good.	Cluster group meeting
P8: For cluster, sometimes I was swamped with discipline issues that I had to deal with the students or their parents. There were a lot of time I was not able to attend the cluster meeting because of that. But I will always be there if I am able to.	Cluster group meeting
P7: I understand as a whole school, to implement the school wide strategy to get across the basic concept of teaching and student learning, I think it works well. You have a structured cluster meeting every week that everybody has to go to, so the whole school has one or two things the teachers need to work on regardless of what they are teaching.	Specific school wide instructional strategy
P7: As far as the professional development part, here at this school, since we are departmentalized, I do miss the professional development that is just focus on science, sometimes. So maybe going to workshop just focus on science just to build your content and knowledge base, to just know what's new out there because science is always changing, it's never the same. So I do miss that part.	Need for differentiation
P9: For On-going Applied Professional Growth, I had more involvement with the planning when I was a mentor teacher, so I felt it was more relevant and meaningful to me.	Become mentor teachers or ACs

I isolated the quotes from Ongoing Professional Growth element on Atlas.ti and retrieved the high frequency concurrent codes report from this category. I found collaboration was coded with the highest frequency. The subcategories were developed based on the code frequency report and include the subcategories in Figure 4.

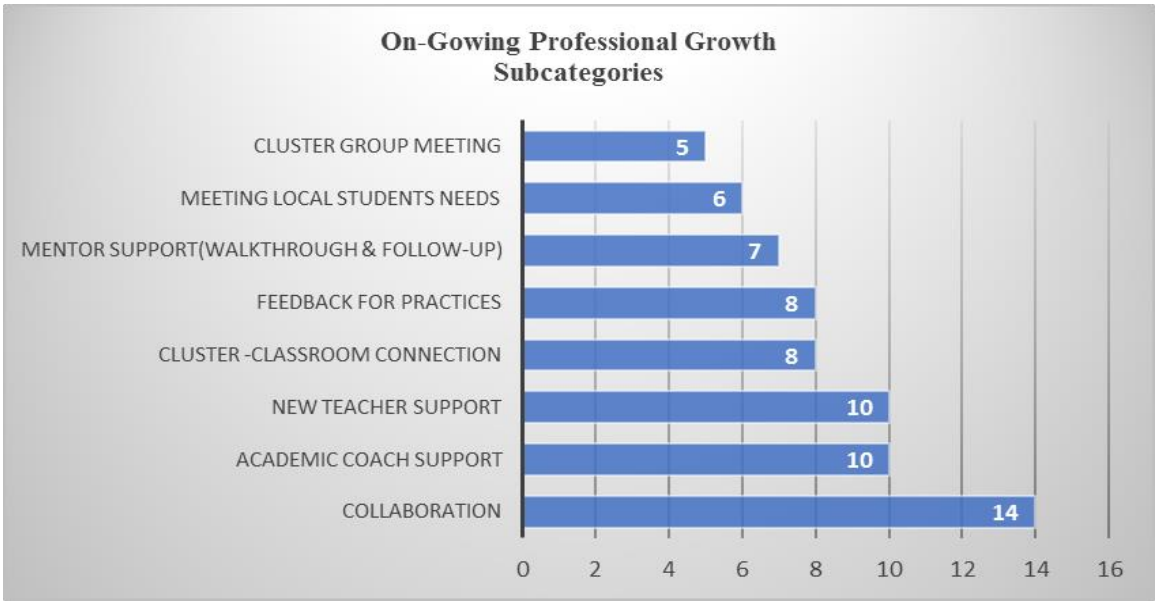

Figure 4. On-going professional growth subcategories.

In term Performance-Based compensation, most participants viewed it going hand in hand with the components of Instructionally Focused Accountability. The teacher's compensation is determined by teacher's SKR (skills, knowledge and responsibility) score, student value-added scores, and the school value-added score. SKR scores are associated with the teacher evaluation scores which are major components of the Instructionally Focused Accountability. The SKR scores have a direct link to teachers' performance in their classrooms. I have included the summarized responses from the

participants and the corresponding codes for Performance-Based Compensation in Table 7.

Table 7

Interview Data Analysis Question 1-TAP Element of the Performance-Based Compensation

Interview question 1 summarized responses-TAP element of the Performance-Based Compensation	Thematic Code
P1: The money part...it's good. I don't see that as the whole focus, but it is nice to be rewarded for how well you do. It is something that continue to drive you.	Reward & incentive
P2: your performance pay, based on how well you have been evaluated and how things went throughout the year, everything is formulated into a magic number to determine how much pay you will receive for your work.	Reward & incentive
P8: I have been able to get my performance based compensation every year and the extra money does help, so I like that part. And I know my students are making improvement.	Link to student growth
P9: It is good to have the extra money at the end because your student made the expected growth in academic achievement. I think it is fair to measure the academic achievement growth for the teacher compensation because the students came into school with very low reading, writing, and math skills and it is rewarding to see students grow academically using the measure by TAP.	Link to student growth
P4: The performance based compensation for me is that I called it a stipend, you get it at the end of the school year because if you performed, and your kids met the particular goal. I am telling you, if it helps my kids, I will do it whether I am compensated or not.	Money does not change what I do
P6: The money is nice, I am going to say that. The extra is nice. But I work hard for my kids, my kids get the best out of me that I can give that day, not matter if I am getting the extra pay or not.	Money does not change what I do
P3: Performance based compensation which the funding that come in for the teachers. Using the 19 indicators, and the SKR scores. But research really shows that compensation really doesn't improve student achievement. So I don't think that is the strongest one, but it is there as an incentive to the teachers. Without the compensation, it actually can help the teachers to collaborate with each other better because it will be fair to everybody.	Reward and incentive, not backed by research, equity issue, competitive instead of collaborative
P5: I think it's…. the compensation is…honestly, I have mixed feeling about it. But I don't know what the right way is. I feel teachers are compensated but I think sometimes teachers are over compensated, sometimes teachers are under-compensated because the teacher without scores…kind of ride on the coat tails of teachers who are highly effective. I sometimes have issues with that. But it is not my battle to fight. But I know my teacher understand how the compensation works, none of them are really opposed to it. That's a good thing.	Equity issue
P7: The part on the compensation. It is nice to get that extra money. But I think in the end, it makes it competitive.	Competitive instead of collaborative

Most teacher participants stated that the Performance-Based compensation was rewarding except for Participants 3, 5 and 7. Participant 3 stated she did not find the empirical evidence that links teacher compensation to student achievement. Participant 7 teacher thought the teacher compensation caused unhealthy competition among the teachers and it was a hindrance to the collegial collaboration. Although agreeing with the performance based compensation, Participant 5 did not think the payout structure was fair for all teachers and believed there was a need to restructure the payout procedure so it would be fair to all.

Table 8

Interview Data Analysis Question 1-TAP Element of the Instructionally Focused Accountability

Interview question 1 summarized responses-TAP element of the Performance-Based Compensation	Thematic Code
P1: The classroom evaluation was probably the most nerve wrecking, and it really took some time for me to adjust to it… it also makes you more accountable… It was challenging but I got used to it.	Teacher evaluation
P2: by looking at the instructional growth, focus on the instruction, using the rubric for evaluation, how to implement the rubric into your lesson.	Change instructional practices
P3: The cluster leaders provide instructional strategy in the classroom for the teachers to use with the students. Next, they go in (the classroom) to follow up with the teachers to help reinforce the strategy, that is when the students are involved.	Walkthrough, AC support
P4: Instructional focused accountability, that's the evaluations. I have never been bothered though by evaluations. Evaluation are a part of the growth.	Teacher evaluation, professional growth
P5: We go in teacher's classroom and we evaluate. We work on developing and improving that IGP through classroom walkthrough, observations, and conferences. We go in, maybe we model something that the teacher needs to refine. Or maybe we go in and we team teach with them to help them focus on improving their instruction.	Teacher evaluation, walkthrough, feedback on practices, AC support
P6: I have good evaluation as far as good feedback. I have ones that are OK. Most of the evaluations I think they are fair. I never felt that I was marked down. We've been very close on our interrater reliability, within 1.	Teacher evaluation, feedback on practices
P7: …being evaluated with the SKR scores, your skills, knowledge, and responsibilities…..	Teacher evaluation
P8: I was able to gradually increase my SKR scores over the year, and I also saw my students' scores going up.	Teacher evaluation, student growth

Based on the responses from the participants, the Instructionally Focused Accountability is associated with teacher evaluation. Other subcategories associated with the Instructionally Focused Accountability are walkthrough, feedback on teachers' instructional practices, and academic coach support, which leads to teacher's change in instructional practices.

When asked, in participant's opinion, about the four different elements of the TAP if they all were equally important and essential for the TAP implementation, each participant had different opinion about this topic. The participants' summarized responses are organized in Table 9.

Table 9

Interview Data Analysis Question 1-Reponses to the Importance of the Four Elements

Interview question 1 summarized responses-the importance of the four elements	Thematic Code
P1: I think I agree with the most is that professional development part. As a group, it is helpful… I think they are all good. I think the teachers still need the compensation, they still need to have something, like a motivator.	On-going professional growth, teacher compensation
P2: I think all the elements are equal parts in order to work. I don't think it would be effective if you leave one out. It is important that you have all four pieces together. P8: I do think we need all four components of the TAP because they work well together.	Multiple career paths, on-going professional growth, performance-based compensation, instructionally focused accountability
P3: I think the biggest impact from the four components of the TAP would be the mentors being able to go into the teachers' classroom doing the professional development and the follow-up with the teachers. I see that is the strongest component. The one that I agree the least is the compensation. I don't think it makes that big of impact. The one that got the most money was the one who is fighting the TAP. It should be the other way around, so I don't think it is making any impact.	Multiple career paths, instructionally focused accountability
P4: I don't care if there is the compensation. That so does not interest me. I like money, don't get me wrong, and it helps pay a couple of bills, that's it. But if it weren't there, I will still be doing the same thing. The other two…, the professional growth and instructional accountability, to me, are the most important right now.	On-going professional development, instructionally focused accountability
P5: The instructional part, the rubric, I think that is the best. I don't know if I disagree totally, but it might be the payout… I think that payout kind of creates a competition among the teacher, it creates stress and anxiety for teachers. Not just amongst the teachers, but amongst schools. I mean, my school, your school, but I don't know how to fix it.	Instructionally focused accountability
P6: I definitely agree with the professional development. I think it's great we have time because we are so busy during the week that we actually had the time to collaborate, talk and share. I think that is the number 1 for me. The number 2 it would be the accountability. I think the feedback from evaluation is really good. I think it keeps me on my toes because it is easy to get laxed. If I know someone is walking down the hall just pop in, that keep me on track because we all need that. Third, probably the multiple career paths. The person taught 3rd grade with me has now moved up to academic coach, and she is awesome at it. I would not be. But I think it is a good thing. For me, the compensation would be the last, just because one, it does not influence how I do my job. Two, I don't know if it is all equitable and fair. But it is nice, it is a nice bonus, but money doesn't drive how I teach.	On-going professional growth, instructionally focused accountability
P7: I think we can do without the compensation. Simply because it has that negative aspect to it. The two areas I think we definitely need are...You do need to have your school on the same page, whether is posting your objectives, or certain strategies being used in your class, yes, I think that's needed. But where are you to roll it out? You roll it out in the cluster. So I would say the two areas are the learning of the new strategy in the cluster, and incorporate those strategies in your teaching.	Cluster group meeting, school wide instructional strategies
P9: For the four elements of the TAP, I agree with the most is the multiple career paths because I benefitted from it when I was a mentor teacher. I believe it provides the most professional growth for a teacher. And teachers do need the extra supports from the academic coaches and mentor teachers. I do believe we need all four components for the TAP to see the impact of the framework. But if we do not have the funding for the compensation, I guess we will have to do without the money.	Multiple career paths, on-going professional development growth, teacher compensation, instructionally focused accountability

It is interesting to note that participants have very different views on Performance-Based Compensation. While Participants 1, 2, 8, 9 stated that they believed the Performance-Based Compensation was a good incentive for teachers, Participants 3, 4, 5, 6, 7 thought there was a negative effect of the teacher compensation (promoting competition) and they could do without the compensation. Based on the frequency code analysis for this portion of responses, the Instructionally Focused Accountability and On-Going Applied Professional Growth were mentioned as the top two from the participants. The frequency for the importance of the four elements is shown in Figure 5.

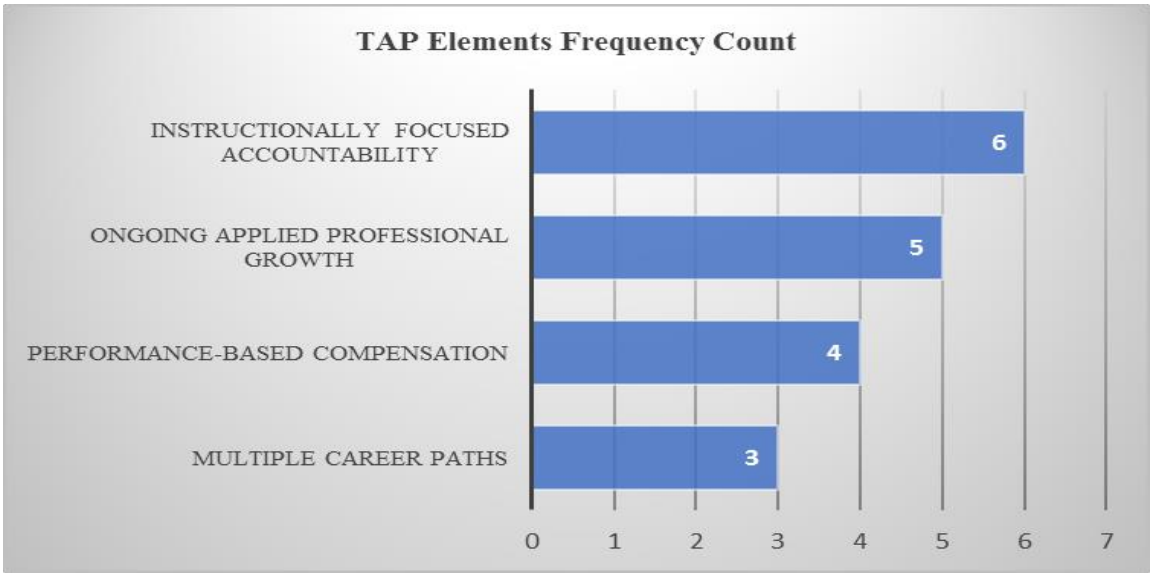

Figure 5. The frequency counts of the four elements of the TAP.

Research Question 2: To what extent were the experiences of the implementation of the TAP framework challenging and /or rewarding to the teacher involved? There are three different parts included in RQ2: the most rewarding experiences, the most challenging experiences, and the kind of preparation the school district could do in the future to make the TAP implementation less challenging. The

summarized responses from each participant for most rewarding experiences are recorded in Table 10.

Table 10

Interview Data Analysis Question 2- Most Rewarding Experiences

Interview question 2 summarized responses-Most rewarding experiences	Thematic Code
P1: I mean weekly we go to the cluster meeting, it's almost something we do religiously every week. For me, it's the sharing of the ideas.	Cluster group meeting, collaboration
P2: I think the most rewarding thing for myself would be the professional growth. I know how to make the adjustment to my lessons, so my students are more engaged, more involved in the lesson. I'm now more effective and more innovative with the latest trend and latest strategy for them so you have their attentions in class and makes them the most effective learners. I felt that this was the most rewarding thing to be that type of teachers who do not have any loss of instructional time and to see the academic growth in my students.	On-going professional growth, instructional rubric, student engagement, student academic growth
P3: I think the most rewarding experience is being able to sit with and collaborate your peers, your co-workers, and your colleague. Just to collaborate and to have that academic conversation about where their students are at and what we are going to do for our students.	Collaboration
P4: Over the past couple of years, I have changed many elements of my teaching style, and it wasn't easy to do. Even I wanted to do it, I found I always fell back to old habit. But with evaluations and walkthroughs, they kept me on my toes. Slowly but surely, my teaching style has changed, and I think my students' scores have gone up.	Change of instructional strategy, student academic growth, instructionally focused accountability
P5: When we started the TAP, I would say one teacher was inadequate. But through the years, I have watched her blossom into a wonderful teacher because she uses the rubric. She had the support (from ACs, mentors or principal). I think the quality of teaching has really elevated since TAP came through. Because we have guidelines now, we have a structure.	Instructional rubric, change of instructional strategy, AC and mentor teacher support
P6: To me is the collaboration piece. We build that commonality of language in meeting. We work really well together. Everybody brings the evidence to share. People are willing to take risks. So, I think that collaboration piece is really huge.	Collaboration, cluster group meeting
P7: I guess from a mentor's perspective, the most rewarding part is actually to be in somebody else's class. For me, I learned more from them for some of the crossed-content areas strategies. I also had a better idea of the kind of the background knowledge my students had.	Walkthrough, personal growth
P8: The most rewarding experience is that I was able to see the improvement each year. I can see that through my evaluation scores and student academic growth scores.	Personal growth, student academic grow
P9: The most rewarding experience for me was becoming a mentor teacher. I had a lot of professional growth during that period. I was able to be involved in the decision making process as a member of the TAP Leadership Team. I felt empowered during the process.	Multiple career paths, personal growth

Participants 2, 7 and 9 reported their personal professional growth was the most rewarding experience since the implementation. These teachers stated the personal professional growth was associated with being involved in the Multiple Career Paths. Participant 8 claimed that he saw a gradual improvement on his evaluation scores each year, so he knew that he was a better teacher than he was four years ago. Participants 1, 3 and 6 valued the collaboration during the weekly cluster group meeting. The discussion around the student achievement scores, student work samples, and specific teaching strategies had helped these teachers with their own classroom instruction tremendously. Participant 4 indicated the most rewarding experience for her was her observation of student achievement growth because of the change of her classroom instruction, which was the result of the Instructionally Focused Accountability and On-Going Applied Professional Growth. I show the frequency count of the most rewarding experiences from the participants in Figure 6.

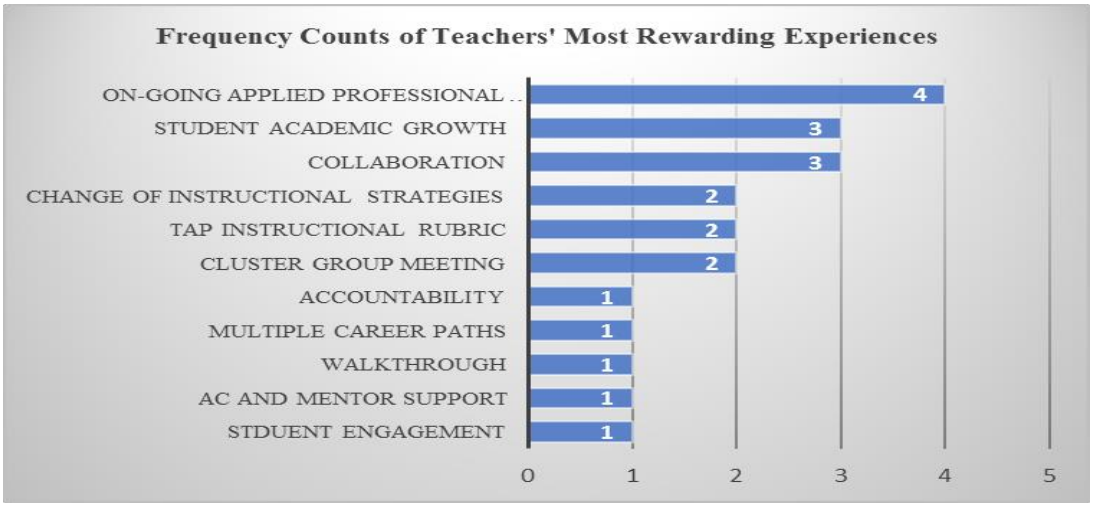

Figure 6. Frequency counts of teachers' most rewarding experiences.

The participants reported a wide range of challenging experiences initially. The summarized responses of the most challenging experiences are recorded in Table 11.

Table 11

Interview Data Analysis Question 2- Most Challenging Experiences

Interview question 2 summarized responses-Most challenging experiences	Thematic Code
P1: I think the most difficult was the rubric. I used the rubric with my lessons. At the beginning, I tried to put everything in my lesson (19 indicators), and my lesson went too long. So for me, it was challenging to combine the components together.	TAP Instructional Rubric
P2: I think as an academic coach (master teacher), the most challenging thing for me is to come across with the teachers who are not willing to make a change, who felt that what they have done for decades is still effective today.	Resistant teachers
P3: The most challenging….is the evaluation process. I really don't like to do evaluations. That is my least favorite part of the job. Especially when there is no inter-rater reliability among the evaluators. At my school, it is one of the administrators who scores higher, so it doesn't help. It is not better for the teacher and it is not better for the team. In this case, the teachers just slip back.	Teacher evaluation, interrater-reliability
P4: The most difficult thing for me at first was trying to figure out what was going on for the first two years. We were mandated to do certain things, it was like trying to force feed us into a mold. Just like a kid doesn't learn the same way, a teacher does not teach the same way.	Not able to make connection to classroom practices
P5: It was probably recording my follow-up just because I do follow-up all day long and I am not always at a computer where I can record it, and I had a hard time keeping up with it.	Paperwork burden
P6: It is probably the reflections (record it in CODE). I have it all appear in my head. I reflect on my lessons and make adjustment after my lesson each day. But I am terrible about writing it down.	Paperwork burden
P7: Getting people out of their ruts because some teachers here have certain modality of teaching and it is very hard to get them to change, to do something different.	Resistant teachers
P8: The most challenging experience is that for the first two years, I had to teach reading to students. It was difficult for me because I was not a reading teacher. But reading was the school wide goal, so we all had to support the goal at our school. I had to find my materials sometimes to make sure they matched with the standards. But our school was still able to make the growth. It was very challenging to me at the time.	Getting out of my comfort zone
P9: The most challenging experience was the paperwork involved with the teacher evaluation process. I had a hard time to keep up with the paperwork as a mentor teacher.	Paperwork burden

Participants 1 and 3 mentioned the evaluation process was the most challenging experience for various reasons. For Participant 1, the total 19 indicators on the TAP Instructional Rubric were very intimidating and difficult for her initially. Reportedly it was hard for her to try to get perfect scores in all areas. Participant 3 faced the challenge of the interrater-reliability issue at her school regarding teacher evaluation. Participants 5, 6, and 9 revealed the paperwork burden as the challenge they faced. The paperwork burden for Participants 5 and 9 came from the extra duties associated with being a mentor or an academic coach. For Participant 6, it was the paperwork associated with the teacher reflection. She indicated that she did reflect after each of her lessons, however, it was just not a habit for her to write her reflection down on paper, not to mention to record it in a specific data program on the computer.

Participant 4 reported that the first two year of the TAP implementation were the most challenging for her. She was unable to make any connection between the TAP implementation and her classroom instructional practices. She felt disconnected with all the components of the TAP because she never did understand how the four components worked together and how they related to student academic achievement growth. She was able to make the connection between the cluster learning to her classroom with the help of her academic coach.

Participants 2 and 7 stated the difficulty and challenge they had to face was convincing other teachers to get out of their comfort zone to change their instructional practices in their classrooms. The challenge experience for Participant 8 was associated with the school wide reading strategy that he had to implement in the classroom for the

first two years. He stated that he was not certified in reading; therefore, he was not very comfortable in teaching reading to his students initially. The frequency counts of the co-concurring codes for most challenging experiences are shown in Figure 7.

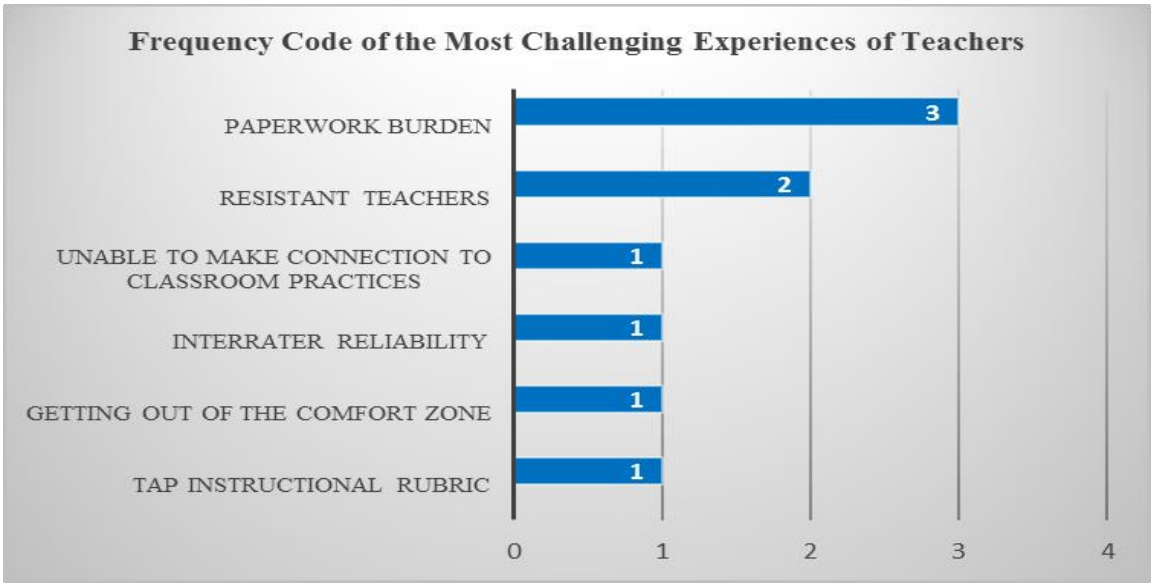

Figure 7. Frequency chart for teachers' most challenging experiences.

Most participants responded similarly when asked what kind of the preparation they felt was needed to make the TAP implementation less challenging for new teachers. Their responses are summarized in Table 12.

Table 12

Interview Data Analysis Question 2- Preparation to Make the TAP Implementation Less Challenging

Interview question 2 summarized responses-Preparation to make the implementation less challenging	Thematic Code
P1: First we have to make sure that all teachers have a mentor teacher. Otherwise, it will be frustrating because it's hard. The next thing will probably be New Teacher Induction Program. One year of that was not enough. It was the 2nd and 3rd year that really put me on my feet that I am more confident about things.	Mentor teacher support, new teacher orientation program
P2: As an Academic coach, I need to make sure to utilize the staff development time to introduce and review the TAP instructional rubric. When TAP was first implemented in our district, it did not only take one week to cover everything. It almost took us half a year to implement the rubric. Now we have less time for the new teachers to learn about the rubric.	Introduce and review the TAP instructional rubric
P3: I think we need to be more consistent in our scoring, and we need to really understand what we are looking for from our teachers based on the rubric. It is hard to distinct sometimes. It would be nice if we could clearly define the rubric at each school site for all the evaluators.	Interrater reliability for teacher evaluation
P4: I had seen way too many veteran teachers just said, "I am outta here!" Because they could not cope with all these rapid changes. It was too much, too fast. you can't change them in one school year. You can't change them in three school years. It has to be both not being spoon fed and a little slower	Change process-slow it down
P5: I think they definitely need an orientation on just TAP by itself. Not with curriculum, not with everything else, but just TAP. A real in-depth introduction about what it is, its purpose, how we go about business, and just lay out the framework for them.	New teacher orientation program
P6: I think if we can keep it (meeting) differentiated for our teachers, I think that is big. I think there is time we can be together, but I think there is time we each need different things.	Differentiated cluster group meeting
P7: As far as the professional development part, here at this school, since we are departmentalized, I do miss the professional development that is just focus on science sometimes. So maybe going to workshop just focus on science just to build your content and knowledge base, to just know what's new out there because science is always changing, it's never the same.	Differentiated cluster group meeting
P8: Now I am in charge of and teaching the Why Try program, the format of the program also fit into may areas of the TAP instructional rubric. So assist teachers to make connection of the TAP rubric in the content areas they teach would help tremendously.	Assist teachers to make connection of the TAP rubric in their content area.
P9: I do believe that the TAP instructional rubric needs to be reviewed every year, especially for the teachers who are new to the district and do not have any experience with the TAP program. It was difficult and overwhelming for me at the beginning. Even for the teachers have been in TAP, there is still need for review each year to deepen their understanding of the rubric.	Review the TAP instructional rubric

They are patterns emerged from the participants' responses regarding the kind of preparations needed to make the TAP implementation less challenging. The patterns are: to create an extended new teacher orientation program for the TAP components, especially for the TAP instructional rubric; to review the TAP instructional rubric each year to deepen the teachers' understanding of the best teaching practices; to differentiate the cluster for teachers in different content areas; to continue the TAP support system (mentor and AC support); and to ensure the interrater reliability for teacher evaluation process. Participants 1 and 5 believed an extended new teacher orientation program could help the new teachers better prepared for the implementation of the TAP at the district. Participant 2 believed by reviewing the TAP rubric yearly with the continuing teachers at each school site would deepen teachers' understanding of the research based teaching strategies on the TAP rubric and help refining teachers' instructional practices in the classroom.

Research Question 3: To what extent did the TAP process change teacher's instructional practices in the classroom? There are two parts to this research question: one is to ask the participants to reflect on their own changes in their instructional practices, the other is to ask the participants to reflect on the turning point of the change. I summarized the participants' responses regarding the change in instructional practices in Table 13.

Most of the changed instructional practices mentioned by the participants are the best teaching practices on the TAP instructional rubric, except for use of data, peer classroom observation, and team teaching. For example, modeling and using visual are

included in the Presenting Instructional Content indicator of the rubric, use of technology and student engagement are part of Material and Activities indicator. Grouping Students, Standards and Objectives and Academic Feedback are all the indicators from the TAP instructional rubric. Therefore, I use the TAP instructional rubric strategies as one overarching category for the code frequency counts for the participants' responses. The code frequency counts for the instructional practice change is shown in Figure 8.

Table 13

Interview Data Analysis Question 3- Changes in Own Instructional Practices

Interview question 3 summarized responses-Changes in Own Instructional Practices	Thematic Code
P1: I think the biggest change was the 50/50 teacher talk/student talk. That really changed in my classroom. In my teacher preparation program that was not taught to me. The other thing is getting the students to answer the questions in complete sentences.	Student engagement strategy, ELL strategy(schoolwide strategy)
P2: I think as a teacher, one strong point that I learn from the TAP implementation is to use student data. It is very important to look at their state assessment data to see where their weaknesses were and where their strengths were.	Use of data
P3: Being a part of leadership team and having to do the walkthroughs, you start to observe the strategies that other teachers are using. Bring back those strategies to your classroom to use as a teacher. I hope that I can make some of the teachers to have these walkthroughs to see what we can see and to pick up those things to use them as their own tool box.	Instructional strategies learned through peer observations
P4: It changed a lot because I use a lot more technology now in my classroom. I use a lot more modeling than I used to. Modeling was something I did sometimes, now I do a lot of modeling. Manipulatives, illustrations, my delivery was fast paced, I had to slow it down. Now I pause longer, I wait for answers longer. My praise was a lot more focus than it used to be.	Use of technology (ACT), modeling (PIC), Questioning (wait time), Academic Feedback
P5: First of all, I know the rubric really well now. I can go into a classroom, make an observation, and using that rubric to identify the things or resources that I could do and find to help that teacher. I also really think that team teaching is good because I don't think teachers feel as threatened.	TAP instructional strategies, team teaching
P6: I think it's changed some. I think, one, it's keeping me aware of…you know not slacking off some days…You know I am very bad about…I mean I post my learning objectives, but reminding the kids and talking to them about it, so it's been a very big one to me. Student engagement has been another.	Standards and Objectives, Student engagement (ACT)
P7: I think there is certain aspect that I changed. I also think I am aware of the things I am doing, like student group work. Nobody said this was a strategy that you need to do the group work in the past. …instructional objectives. I think in the past, I never did put them on the board, now 98% percent of the time I do.	Grouping students, standards and objectives
P8: I now use activities that are meaningful are relevant to students' lives. There is creativity and imagination involved in the activities. I use processing questions help me with the questioning and thinking. I sometime incorporated the video and music into my PowerPoint to make the lesson more interesting.	Materials and activities
P9: I was able to deepen my understanding of the rubric but definitely need time to implement these changes into my classroom, like grouping students and using visuals for presenting instructional content.	Grouping students and using visuals (PIC)

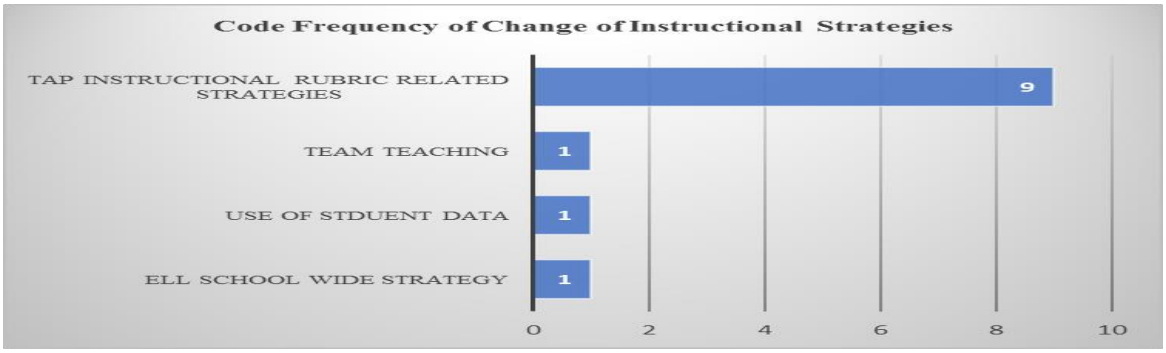

Figure 8. Code frequency of change of instructional strategies.

For the next part of the research question, turning point of the change, most participants stated the change in practices occurred gradually for them. Only a couple of the participants claimed that they made the switch since the very beginning of the TAP implementation. I organized the summarized responses from the participants regarding the turning point of the change in Table 14 and the code frequency chart for the turning point of change in Figure 9.

Table 14

Interview Data Analysis Question 3- Turning Point of the Change

Interview question 3 summarized responses-Changes in Own Instructional Practices	Thematic Code
P1: When all the veteran teachers started to retire because of the new TAP requirements for teachers. I was scared. I vowed to myself that I was going to make it in the ever-changing teaching profession.	Since the beginning of the implementation
P2: I think the turning point is when you started to see the student growth and how you as a teacher are rewarded for your student growth with the compensation at the end. Especially when you saw how the compensation is calculated based on the student performance. That was the Ah-ha moment.	From the moment when students started showing academic growth
P3: Basically, when the teachers saw TAP was a negative thing, it took time to change the attitudes into positive. The change started when the school grouped us into our own content area. For example, for our CTE program, we only see our CTE data, not the data from English or math classes. I think that was the biggest change.	When teachers were group into their own content areas and looking at the student data in their content.
P4: Change is not easy. The teacher evaluation and walkthrough kept me on my toes for the change of my instructional practices.	Gradual change through support from evaluation and walkthrough
P5: I still think I am learning every day because I learned from the teachers. Did I feel like there is a turning point? Not really. Like I said, I feel like I am learning every day, I am still learning	Gradual change and constant learning
P6: I think from the beginning, the walkthroughs, the checklist. I think from the beginning just knowing what they (evaluators) were looking for, that was when I made the changes. Yeah, in the beginning it probably was more that I had to write things down to make sure I do this and I do that. Now just come more and more naturally.	Since the beginning of the implementation
P7: I think my change is very gradual. I used a lot of hands-on activities. But there is also a time that you have to wean them off the hands-on and move toward to the reading aspect of it because the test is most reading. The kids are still struggling with reading so they are still struggling with getting the correct answers.	Gradual change
P8: The change really comes little by little and did not happen all at once so there was not really a turning point for the change.	Gradual change
P9: I still have areas that I need to focus on in term of the TAP instructional rubric because everyone has his or her strengths and weaknesses, nobody can be high flying all the time. The key is to make consistent gradual change for the better.	Gradual change

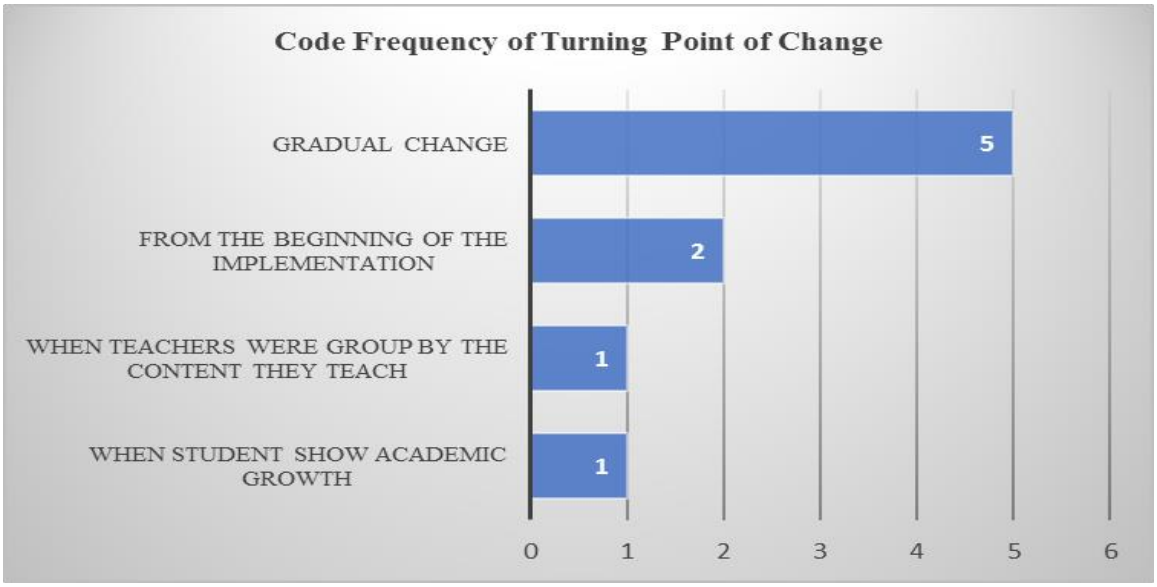

Figure 9. Code frequency of turning point of change.

Research Question 4: To what extent did the Native American cultural setting influence the implementation of the TAP school reform framework? Most of the participants paused when I asked this question except for Participants 3 and 5. They both mentioned the influence of the Native culture of the four cardinal directions principle of the beauty way paths and believed the beauty way paths of the Native culture fits right into the TAP implementation.

The beauty way path is the cultural philosophy of life of the local traditional native people. The traditional native people believe the learning as a being begins in the homes when an infant is first born and enters the home in the east direction, which represents thinking and mental development stage. The infant then moves to the south direction, which represents planning and emotional development stage, and becomes a child. As the child develops into adulthood, she or he is in the west direction, which represents living and physical development stage. When a being moves to the north

direction, he or she will be in the reflecting stage of life which is also the spiritual development stage of a person. However, only one school of the district incorporated and used the native beauty way cultural philosophy to build learning targets in four directions for student learning in the classroom. The summarized responses of the participants are shown in Table 15.

Table 15

Interview Data Analysis Question 4- The Impact of the Native Culture on the TAP Implementation

Interview question 4 summarized responses-The impact of the native culture on the TAP implementation	Thematic Code
P1: Many of my students do not have a good foundational skill in both English and native language. I see that in 5th and 6th grade, the kids don't know how to express what they want to say in English. Some students don't have a very good grasp of native language either. They are somewhere in between, that is why you have this broken English and broken native speakers from students.	Loss of native language
P2: The implementation at my current school is not taken from the traditional point of view, but a very modernized implementation. Where they haven't brought the culture into the implementation.	No cultural connection
P3: I don't think there is any impact from the native culture for the implementation. We were trying to implement the TAP into our own culture at the school and we had the learning target that goes by the four directions. We were trying to incorporate native culture into TAP. But I don't think it made a big impact, though. Just because our kids are native students doesn't mean that the strategy they are providing is going to impact any student.	Cultural connection with the implementation
P4: The hindrances I have run into are Native taboos. You can't talk about death, you can't talk about spiders, you can't talk about snakes, you can't talk about hunting.	Cultural taboo limits what you can teach in class
P5: Native culture and the TAP hold hands. The DICE (data, IGP, cluster, evaluation) with the four different colors, if you go around the grid, everything is aligned. The planning, the implementation, the assessing, it's all in line with DICE…No, I have not discussed this with my teachers.	Identify the cultural connection but not used for implementation
P6: Native students are really slow and methodical. Bright, but slow. So pacing of the TAP is a little bit off for the Native population. But I think TAP is good with the rapport for the classroom culture.	No cultural connection
P7: I am just thinking for the students who come into my classroom, how many of them are actually practicing native culture? It is hard to say. A lot of them go to the bible classes, they go to the bible study, so the culture does not matter to them. They are actually studying a different culture, basically.	Loss of cultural traditional practices
P8: My wife is a Navajo, but she is not traditional. She was brought up in Christian ways and did not know and practice the native traditions. I think many of the kids here are the same way. Most of the kids grow up in church and are influenced by Christianity. They don't really practice the tradition.	Loss of cultural traditional practices
P9: I really do not think the native culture play a role in the implementation of the TAP. I am not saying that it is not the nature of native people to seek academic excellence but some of the older generations do have very negative feelings about schools due to their experiences with the boarding school.	No cultural connection

Participant 1 mentioned the loss of native language amongst the new generation of native American students. She found there was no point of reference for some of her students to build on as an English language learner because they did not have the foundational skill in both native and English languages. Those students who spoke fragmented language in both native and English languages were the ones who struggled the most at school. Participants 7, 8, and 9 observed a decline of the native tradition amongst the new generation. They mentioned many native American students were brought up in church and did not practice the native tradition any more. Consequently, these teachers did not think there was any connection between the native cultures and the TAP implementation. The code frequency chart of the responses for the impact of the native culture on the TAP implementation is shown in Figure 10.

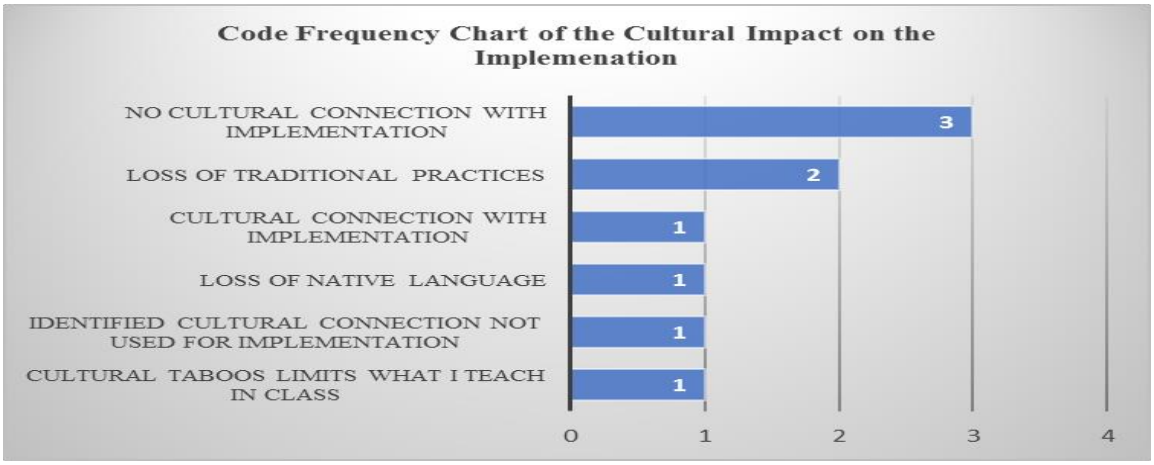

Figure 10. Code frequency chart of the cultural impact on the TAP implementation.

Results of Walkthrough Observation

The walkthrough observation was used to triangulate the findings from the interview. I took field notes on the Walkthrough Observational Protocol (Appendix D).

The field notes were entered into the Walkthrough Observational Protocol template as a word document and transferred to a PDF document and saved in a CAQDAS program. I used the walkthrough observation data to validate the responses from the participants for RQ 3: How does the TAP process changes teachers' instructional practices in the classroom? I used the CAQDAS program to isolate the codes frequency for walkthrough observation and determined the following themes: TAP Instructional Rubric effective teaching strategies, student engagement strategies, specific teaching strategies, aligned lesson objectivities, aligned learning activities, and aligned academic vocabulary. The code frequency chart of the walkthrough observation is shown in Figure 11.

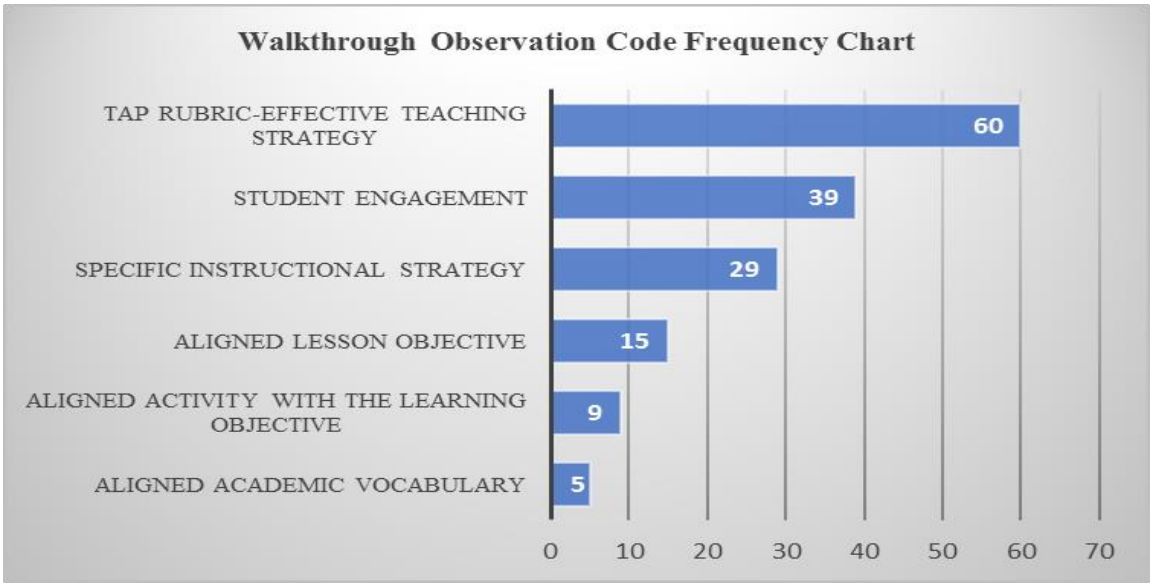

Figure 11. Walkthrough observation code frequency chart.

The subcategories of the themes were determined by separating out the quotes under each code from the CAQDAS program and the results of the walkthrough observation validated what the participants reported in in-depth interviews. For example, teachers reported that the TAP Instructional Rubric had changed their practices in the

classroom. It is evident that the results on Figure 11 validate the teachers' self-report of implementing the effective teaching strategies from the TAP rubric in their classrooms. Furthermore, teachers recounted that the connection between the learning from the cluster group meeting and the classroom application increased the student engagement and enhanced their own instruction in the classroom. Therefore, the teachers' claims were supported and corroborated by the data from the walkthrough observation. The corroborated evidence from the interview and walkthrough observation in answering the Research Question 3 are listed in Table 16. The subcategories of the walkthrough observation are displayed in Table 17.

Table 16

The Corroborated Evidence from the Interview and Walkthrough Observation Regarding Research Question 3

Interview thematic code for question 3	Summarized Evidence from walkthrough observation
P1: Student engagement strategy ELL strategy(schoolwide strategy)	• Students used TPR for their answers (thumb-up, thumb-down) • Engaged in think-pair-talk to discuss the teacher's questions. • Took turn to share their idea to a partner (30 sec) for active listening and speaking. • 50/50 teacher/student talk • Students answered the teacher's questions with complete sentences.
P2: Use of data	• Use of Achieve 3000 Reading Lexile Level scores to progress monitoring student progress.
P3: Instructional strategies learned through peer observations	• Used hands-on, real life scenario for students to practice the accounting skills. (TAP-Materials and Activities) • Provided internal summary for students by reviewing the lesson objectives. (TAP Rubric Standards & Objectives) • Used technology for her instruction as well as for student skill practice. (TAP-Materials and Activities)
P4: Use of technology (ACT), Modeling (PIC), Questioning (wait time), Academic Feedback	• Linked student's learning to their prior learning. • Utilized a video lesson to teach content clues. She stopped the video to ask questions to check for student understanding and to explain further for her students if there is confusion. • Provided opportunity for student to student interaction by asking student to discuss in small group and to come up with the answer to her questions.
P5: TAP instructional strategies, Team teaching	• Engaged students in each center activity without further instruction from the teacher while she worked with a small group of student for guided reading. • She teamed up with a teacher and taught in the teacher's classroom.
P6: Standards and Objectives, Student engagement (ACT)	• Learning objective was posted on focus wall and stated to her students. • Students were in small group to practice their skills.
P7: Grouping students, Standards and objectives	• Provided a visual map for students to identify the constellations using pair grouping during the lesson. • Learning objectives posted and stated to students
P8: Materials and activities	• Used the sub-culture of students (a rap song) as a hook to deliver the content. • Asked students questions regarding the content objective. • Gave real life examples that relate to students. • Used kinesthetic activity to meet student learning needs.
P9: Grouping students, Using visuals (PIC)	• Work on the differentiated math remediation computer program individually (Math 180). • Grouped students based on their ability and differentiate the materials and the levels of the math lesson on the computer.

Based on the co-occurring code report from the walkthrough observation, I developed the subcategories for the walkthrough observations. It is evident that many effective teaching strategies listed on the TAP rubric were observed in the classroom. The reported shool-wide ELL strategies were also observed in the teacher's classroom. The thematic categories and subcategories are recorded in Table 17.

Table 17

Thematic Categories and Subcategories for Walkthrough Observation

Category	Subcategory
TAP Rubric effective teaching strategies	• Learning environment • Presenting instructional content • Questioning (high frequency, but not higher order thinking questions) • Activities and materials • Academic feedback • Grouping students • Expectations • Problem solving • Lesson structure and pacing • Assessment
Student engagement strategies	• Total physical responses (TPR) from students • Pair discussion (think-pair-talk) • Small group discussion • Answering teacher's questions • Asking teacher questions • Working together on group projects or activities • Working on individual assignment on the computer • Working on center activities
Specific instructional strategies	• Reading comprehension strategies • Reading fluency strategies • ELL methodologies • Use of technologies • Use of academic vocabulary in conversation • Note taking strategies • Use of manipulative, hands-on materials and kinesthetic activities • Real-life application • Co-teaching
Aligned lesson objectives	NA
Aligned learning activities	NA
Aligned academic vocabulary	NA

Results of Documentation (Lesson Plan) Review

The purpose of the lesson plan collection was to validate the changes of the instructional practices in the classroom as stated and observed through the in-depth interview and walkthrough observation. However, only six teachers submitted their lesson plans of the walkthrough observations to me. Although I did not detect a uniformed district lesson plan template or lesson framework from the submitted lesson plans, I did detect that all collected lesson plans indicated an alignment among the district curriculum calendar, weekly and daily learning objectives. The learning activities and materials I observed from the walkthrough corroborated the alignment between the learning objectives and learning activities in the classroom. I organized the result of the lesson plan documentation review in Table 18.

Table 18

Lesson Plan Document Analysis

Participant	Lesson Plan Document Analysis
Participant 1	Lesson: Author's purpose & point of view Learning materials: • Short passages containing various author's purposes and point of views. • Foldable notebook: to take notes of different author's POVs Learning activities: • highlight(color coded) the passages with different author's POVs in pairs. • thumb up and thumb down, color check for accuracy of identifying various author's POVs. Yes_X__No___ Observed alignment between the learning objective and the district curriculum calendar Yes_X__No___ Observed alignment between the learning objectives, the learning materials, and learning activities
Participant 2	Lesson: Write Arguments to support claims with clear reasons and evidence logically. Learning materials: Achieve 3000 Differentiated Reading program. Learning activity: Students need to make a claim on the thought question, and use the evidence from the article to back up their opinion. Students will check their reading lexile level on their Achieve 3000 program. Yes_X__No___ Observed alignment between the learning objective and the district curriculum calendar Yes_X__No___ Observed alignment between the learning objectives, the learning materials, and learning activities
Participant 3	Lesson: Demonstrate the Steps of the Accounting Cycle Learning materials: electronic trial leger files with and without a balance Learning activities: students will prepare the trial balances, identify the errors, make corrections on the entries, analyze the business transaction to create an accurate source document, and journalize the source document provided by their peers. Yes_X__No___ Observed alignment between the learning objective and the district curriculum calendar Yes_X__No___ Observed alignment between the learning objectives, the learning materials, and learning activities
Participant 5	Lesson: Main idea and supporting details through erosion, weathering, and deposition Learning materials: Copies of leveled expository text, graphic organizers, note cards Learning activity: shared reading of leveled erosion articles, small group activities while teacher modeled the reading with a group of students. Yes_X__No___ Observed alignment between the learning objective and the district curriculum calendar Yes_X__No___ Observed alignment between the learning objectives, the learning materials, and learning activities
Participant 7	Lesson: Constellation (Explain the relationship among common objects in the solar systems, galaxy, and universe) Learning materials: Powerpoint of the solar systems and different constellations, star chart Learning activity: students used the start chart to locate and identify the constellations of Ursa Major, Ursa Minor, Cygnus, and Caasiopeia. Yes_X__No___ Observed alignment between the learning objective and the district curriculum calendar Yes_X__No___ Observed alignment between the learning objectives, the learning materials, and learning activities
Participant 8	Lesson: facing challenges (Students will be able to see how they view a challenge can greatly impact their motivation and options for dealing with that challenge) Learning materials: 30 mousetraps, masking tape, blindfolds Learning activity: place students in groups of 2-3 including one person with the blindfold. The students will guide the student with blindfold as to where to step in order to avoid the mousetrap to safety. Student will rotate the roll being blindfolded and guided by other students to walkthrough the mousetrap field to the safety. The teacher will ask students to discuss the process questions in group after the activity Yes_X__No___ Observed alignment between the learning objective and the district curriculum calendar Yes_X__No___ Observed alignment between the learning objectives, the learning materials, and learning activities

Discussion of Findings

I summarized the findings of the interview, walkthrough observation, and lesson plan documents in relation to each research question in the following tables.

Table 19

Summarized Findings in Relation to Research Question 1

Research Question	Interview				Walkthrough Observation	Lesson Plan Analysis
		Initial Attitudes	Attitude Now	Preferred TAP Elements		
	P1	Mixed	Positive	All		
	P2	Positive	Positive	All		
	P3	Positive	Positive	Multiple Career Paths, Accountability		
	P4	Negative	Positive	Ongoing Professional Growth, Accountability		
RQ 1					NA	NA
	P5	Positive	Positive	TAP Rubric		
	P6	Positive	Stressful	Ongoing professional growth, Accountability		
	P7	Resistant	Mixed	Cluster Meeting		
	P8	Positive	Positive	All		
	P9	Positive	Positive	All		

The interview data were used to answer all four research questions, walkthrough observation and lesson planning documents were used to answer RQ 3 and RQ 4. Therefore, there were no evidence collected from walkthrough and lesson planning documents for RQ 1 and RQ 2.

Table 20

Summarized Findings in Relation to Research Question 2

Research Question	Interview	Walkthrough Observation	Lesson Plan Analysis
RQ 2	-Teachers' most rewarding experiences: on-going professional growth, student academic growth, collaboration, changes of instructional strategies, TAP instructional rubric, cluster group meeting, multiple career paths, walkthrough, AC & Mentor teachers support -Teachers' most challenging experiences: Paperwork burden, resistant teachers, unable to make cluster-classroom connection, interrater reliability, getting out of comfort zone, instructional rubric -Preparation to make the implementation lesson challenging: continue the AC and Mentor teacher support for teachers, extended new teacher orientation, review TAP rubric yearly, strengthen interrater reliability, differentiate the cluster based on content, slow down the change process.	NA	NA

The walkthrough observation is designed to triangulate the information about the teacher self-reported change of instructional strategies through the in-depth interview for RQ 3. Lesson plan documents served the same purpose as the walkthrough observation mainly to find out if the documentation corroborates the same results as the interview and walkthrough observation to answer the RQ 3. I organized the summarized findings for RQ 3 in Table 21.

Table 21

Summarized Findings in Relation to Research Question 3

Research Question	Interview	Walkthrough Observation	Lesson Plan Analysis
	Reported changes in instructional strategies:	Observed strategies in the classroom:	Documented aligned learning objectives to the district curriculum and state standards from P1, P2, P3, P5, P7, & P8
	-Standards and Objectives (TAP Rubric effective teaching strategy)	-posted learning objectives which aligned with the standards -Teacher referred to learning objective at the beginning and throughout the lessons.	
	-Activities and Materials (TAP Rubric effective teaching strategy) Use of technology	-Students use differentiated reading program (Acieve3000) on the computer individually. -Note taking strategies(Cornell and interactive note taking	
	-Use of activities that are relatable and personally meaningful to students and meet the needs of students	-Use of manipulative, hands-on materials and kinesthetic activities -Real-life application	Documented observed learning materials and activities which were aligned with the learning objectives from P1, P2, P3, P5, P7, & P8
	-Presenting Instructional Content (TAP Rubric effective teaching strategy) Modeling Use of visuals	-Teacher's modeling of the use of reading strategy and graphic organizer during guided reading -use of anchor chart for learning -use of PowerPoint presentation by the teacher to show certain concepts	
	-Grouping students (TAP Rubric effective teaching strategy)	-Teacher used think-pair-share to increase the opportunity for student-to-student interaction -Small group discussion	
RQ 3	-Questioning (TAP Rubric effective teaching strategy)	-proper wait time, high frequency of questions to check for student understanding	
	-Academic feedback (TAP Rubric effective teaching strategy)	-Teacher gave specific oral feedback to students based on their Class assignment. -Teacher used feedback from the students to adjust their instruction during the lesson.	
	-Student engagement strategies	-Students used Total Physical Response(TPR) to answer the teacher's questions. -Students worked together on group project. -Students worked on center activities.	
	-ELL Methodologies	-Syntax surgery activity -50/50 teacher/student talk -Students answered teachers' questions with complete sentences	
	-Use of data	-Teacher used data to monitor student progress on Achieve 3000.	

Table 22

Summarized Findings in Relation to Research Question 4

Research Question	Interview	Walkthrough Observation	Lesson Plan Analysis
RQ4	-Only one participant reported the school leadership team made a cultural connection to the TAP implementation. -One participants mentioned she identified the connection between the native culture and the TAP implementation but did not share the idea with anyone at her school site. -One participant reported that she observed the loss of the native language among younger generation. Two other participants mentioned the loss of native traditional practices. -One participant mentioned the native taboos limited the learning materials for her lesson. -The rest of the participants did not see any connection between the native culture and the TAP implementation.	-One participant made the cultural reference to the four directions of the learning targets for her learners (learning objectives) in the classroom (Participant 3).	Documented cultural relevant four direction of the learning targets from Participant 3.

Upon examining the findings, I found a few unexpected responses from some of the participants. I sought to discover the role of the Native culture on the TAP implementation. I was surprised to find only two (one Native teacher and one non-Native teacher) out of nine teacher participants could make the connection between the TAP implementation and the Native culture. One school out of the district incorporated the cultural connection into the TAP implementation. Researchers have pointed out the importance of the culturally responsive teaching in closing the achievement gap for culturally and linguistically diverse student populations (Bui & Fagan, 2013; Roham, 2013; Topple, 2015). Gay (2010) posited that culturally responsive teaching is to use "cultural knowledge, prior experiences, frame of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective" (p.31) for those culturally and linguistically diverse students. With 97% of the

population in the school district comprised of Native American students, capitalizing the cultural frame of reference of the Native American cultural belief and referencing the four components of the TAP framework would seem to make the TAP implementation more relevant to all stakeholders in the community. However, when Participant 1 tried to use the native language as a frame of reference to teach important concepts and skills to her students, she found her students did not understand what she said in her native language. In other words, her students did not know how to speak the native language and did not have the cultural frame of reference (the native language) for the teacher to build on the academic knowledge and skills for students.

Another surprise was that two teachers were against the Performance Based Compensation component of the TAP framework while the rest of the teachers felt receiving the compensation was part of the most rewarding experience for them, especially when the money was tied to the academic growth of their students. These results supported the controversial findings of the pay-for-performance from literature. While Woessman (2011) and Akiba et al. (2012) found that the countries that provided higher average salary for experienced teachers were likely to have higher national student achievement, researchers such as Lundström (2011) found upper secondary teachers in Sweden perceived the individual performance related pay (PRP) as "arbitrary, unfair, unclear and feel that it fosters an awkward working environment" (p. 389). The finding of Lundström (2011) is like Participant 7 reporting that he felt the performance based compensation created unhealthy competition at school.

On the other hand, based on the executive summary report from Teacher Incentive Fund (TIF) after two years of implementation of the pay-for-performance from various school districts all over the U.S., a small positive impact was found on students' reading achievement in these districts. The same impact was observed on the students' math achievement, but it was not statistically significant (Chiang et al, 2015). However, the report (Chiang et al., 2015) also mentioned that many school districts faced the challenge of not being able to sustain the pay-for-performance bonuses for teachers after the TIF grant money ran out. Berlinger (2013) dismissed the notion that the decision of a teacher's bonus pay or continuous employment should be determined by the value-added scores because the value-added scores are not stable from year to year. Belfield and Heywood (2008) concluded that teachers who received performance pay had reportedly lower job satisfaction.

The last unexpected results came as I received the lesson plans from teachers. After reviewing the lesson plans, various formats with various quality of lessons were observed: some were in detail with evidence of rigor, some only provided outlines of the activities. However, all lesson plans included objectives aligned with the curriculum calendar on Beyond Textbook, which is an online curriculum resource the district utilizes. The district does not have a uniform lesson plan template nor an instructional framework for planning instruction. There is a need to choose a district wide instructional framework and conduct related professional development to train teachers using the framework to plan their instruction. Based on Danielson's (2011) Framework for Teaching, learning activities should lead students to certain desired outcomes through

careful and purposeful lesson planning from teachers. Not only could the completed lesson plan be used for teachers to reflect and refine their practices, some completed lessons could also be used as a tool for professional development for teachers using lesson study format.

Despite the surprises from the findings, I also found some expected information from teachers' responses. For example, the teachers enjoyed the collegial collaboration and they valued the on-going professional growth provided through the learning from the cluster group meeting. There is empirical evidence confirming the benefits of the weekly collaborative process of the TAP cluster group meeting process. Chong and Kong (2012) found teachers can improve their classroom instruction to influence "student work and performance outcomes such as reduced student dropout; absenteeism; and academic gains in math, science and reading" (p. 264) through successful collaboration. Moreover, a teacher collaborative learning context affects teacher self-efficacy, which influences teachers' psychological well-being and their abilities to improve student achievement (Chong & Kong, 2012; Goddard, Goddard & Tschannen-Moran, 2007).

As Participant 1 mentioned, the most positive thing from the TAP implementation process for her was "meeting together as a group, as a grade level, and working with the other teachers. The way I see it is the time we get together with other teachers for the professional development to get help with things we need". Participant 3 also described the most rewarding experience for her was "being able to sit with and collaborate with your peers, your coworkers, and your colleagues and to have that academic conversation about where their students are at and what we are going to do for our students".

Another finding was that the most challenging experience for the participating teacher initially was the TAP instructional rubric. Participant 1 pointed out, "The classroom evaluation was probably the most nerve racking, and it really took some time for me to adjust to it." She also stated that the evaluation made her "more accountable" for her teaching. She continued on explaining why the rubric was so difficult for her at the beginning, "I think the most difficult was the rubric. I used the rubric with my lessons. I will go down and check mark (on the performance indicators): Do I have this? Do I have that?" She went on, "At the beginning, I tried to put everything in my lesson (19 indicators), so my lesson went too long".

Participant 7 had a similar response toward the rubric, reporting there were just too many indicators on the instructional rubric, and it was very difficult for him to get a perfect score. He said, "So you might do well in certain areas, but there is no way that you are good in everything in a fifty-minute period of class". Based on the teachers' responses, it is necessary for the schools to continue reviewing the TAP Instructional Rubric with the teachers at the beginning of each school year.

Many teacher participants mentioned the invaluable support from their academic coaches and the importance of a strong school leadership team. Based on teachers' perceptions, with good academic coaches and a strong leadership team, the school could move the student academic achievement higher. Without good academic coaches and a strong leadership team, the teachers at the school usually struggle. For example, Participant 4 reported because the "academic coaches and mentor teachers presented the information differently", she started to make a connection between the cluster learning

and her classroom instructional practices. She also stated that the follow up from the academic coach and mentors "with the evaluations, with the walkthroughs, kept me on my toes, and kept me thinking, oh I should be doing this. Slowly but surely, for the past couple of years, my teaching style has changed. Once my delivery changed, … my students' scores have gone up".

Participant 6 reported, "We did not have a good academic coach last year. I just say it, we had a terrible one. She was a nice person, but didn't know the program, was not dependable, did not follow through. So, all those inconsistencies (could be seen in a teacher's planning and delivery). It was just not a good situation so we were struggling to get through". Participant 3 also shared, "It all depends on the team that you have, the people you put on the leadership team. If the team is strong, the team is going to move the school". Continuous quality support structure from the academic coach for the teachers and a strong, cohesive leadership team is needed and essential to improve teacher quality directly and student improvement indirectly.

When asked, what could be done to make the TAP implementation a better experience for novice teachers, most teachers believed more time needed to be given to new teachers to familiarize themselves with the TAP instructional rubric. Participant 1 provided a very good insight regarding the new teacher training within the district. She was a new teacher when the district adopted the TAP Framework. She stated that she was in the TAP New Teacher Induction Program when the TAP implementation started. She stressed that she loved the program because it helped her develop a deeper understanding of the TAP Instructional Rubric through the training. She indicated, "I

love it (the TAP New Teacher Induction Program)!... One year of that was not enough. It was the 2nd and 3rd year that really put me on my feet so that I am more confident about things. So, that is one thing I'd really like to see for new teachers".

Another finding was that teachers felt the need for differentiated professional development at the secondary level. As Participant 7 stated,

> Here at this school, since we are departmentalized, I do miss the professional development that is just focused on science sometimes. So maybe going to a science workshop to focus on science and to build your content and knowledge base. It would be good to know what's new out there because science is always changing, it's never the same.

Soine and Lumpe (2014) classified the teacher's content knowledge into three categories: (a) subject matter content knowledge, (b) pedagogical content knowledge, and (c) curricular knowledge. According to Soine and Lumpe's (2014) classification, it is clear to me that opportunity was provided for teachers in the district to build their pedagogical content knowledge through the On-going Professional Growth component of the TAP framework. However, professional development for building teachers' subject matter content knowledge and how to scaffold curricular standards to reach the rigor level of the content knowledge are lacking.

Recommendations

There are several recommendations derived from the findings of my study.

1. Strengthen the native language and cultural courses at the elementary levels in the district. It is important for the school to build a strong

foundation of the native language and culture for its native students so the foundation could be used as a frame of reference for students to build their knowledge from the other content areas.

2. Apply various grants to continue supporting the compensation for teacher performance since most the teachers interviewed believed their hard work was well compensated and would continue to work hard for their students. Another reason for the compensation pay was to retain high quality teachers to stay with the schools in the district on the rural and isolated reservation and to sustain the structure of a teacher support system with an academic coach and mentor teachers.
3. Consider adding different indicators such as student and educator engagement into the evaluation process for determining teacher effectiveness.
4. Determine a district wide lesson plan template to structure a common language for the staff's collaborative lesson planning meetings. The lesson plans collected could be used for teacher reflection of their instructional practices at school and as a tool for exemplar lesson study.
5. Continue the weekly cluster structure for teachers to collaborate, to look at the student data, to refine practices by analyzing student work, and to continuously improve student learning results.

6. Continue the yearly rubric review cycle to deepen teachers' knowledge of the TAP instructional rubric and the application of effective instructional strategies.
7. Continue to fund the academic coach and mentor positions to support teachers in the classroom with co-teaching, teacher evaluations, and classroom walkthroughs, ensuring the quality of instruction in the classroom.
8. Make sure to hire a principal who exhibits strong instructional leadership, rather than a school manager, to focus on effective instruction and student learning. Maintain the current teacher support structure of academic coach and mentor positions to provide continuous follow up and instructional support for teachers.
9. Create a New Teacher Induction Program to support novice teachers' learning process of the TAP implementation, making it a smoother experience for them.
10. Form a professional development committee and follow a professional development planning cycle to plan and to differentiate the professional development for the teachers, meeting the learning needs of both students and teachers in the district.

Conclusion

In this section, I discussed the methodologies of the qualitative case study and provided general descriptions and information about the different participants of this case

study. Detailed descriptions of the data collection and data analysis process were also addressed. There were 10 recommendations derived from the findings. As a result of the study, I noted the need for a development of the district professional development project to align with the goals of the district and to meet the learning needs of both students and teachers.

In Section 3, I provide a discussion on the framework and research related to the project. More than 25 peer reviewed articles, which related to and provided support and rationale for the final project, contributed to the literature review. Other information, such as resources and support needed for the project, project implementation and barriers to the implementation, assessment and evaluation of the project, and the implication and social change resulting from the project are also addressed in the next section.

Section 3: The Project

Introduction

The project, a district professional development plan with a content literacy focus for teachers from upper elementary levels to secondary levels, was designed to provide a comprehensive continuous learning model for teachers to work collaboratively for sustainable improvement in student learning and instructional practices. This plan built on the successes of the district TAP implementation from the study to promote lifelong learning by providing opportunities for teachers to enrich their daily practices and to become more effective in teaching and learning. This plan offers research based practices in teacher professional development, detailed steps and roles and responsibilities for the implementation.

Rationale

Rationale for Project

Based on the results of the study, the teachers reported the TAP Instructional Rubric and the support from an academic coach have helped the teachers change their instructional practices in the classroom. The classroom walkthrough observation corroborated the interviewing data from the teachers because I observed the change in the teachers' classrooms. To most teachers, the on-going, job-embedded professional growth was the most rewarding TAP implementation experience. The results of the study validated the point that job-embedded, on-going professional growth satisfied the needs of teacher pedagogical knowledge through successful collaboration in the weekly cluster

group meeting. Teachers expressed the desire to have a more differentiated approach to meet the needs in different content areas.

There are three different types of teacher content knowledge: subject matter content knowledge, pedagogical content knowledge, and curricular knowledge (Soine & Lumpe, 2014). To satisfy the needs in professional development in the content area, an additional piece of how to improve the teacher subject matter and curricular content knowledge are included in this professional plan using the collaborative inquiry process. For the same reason, Marrongelle, Sztajn, and Smith (2013) noted that teacher professional development was most effective when it was "intensive, on-going, and connected to practice, focused on student learning, and addressed the teaching of specific content" (pp. 206-207).

Rationale for Addressing the Problem

The landscape of the educational field has changed drastically for the last decade. To keep up with the change and prepare students for the challenges they will face in the 21st century, teachers need appropriate trainings and professional development to learn various instructional strategies so they can meet the demands in today's classrooms. For example, Arizona state changed its academic standards for math, science, and ELA to the current State Standards for Career and College Ready (AZCCR) at the beginning of the 2012-2013 school year and fully implemented these standards in the 2014-2015 school year.

The baseline results of the new state assessment AzMERIT, which were aligned with the new standards, revealed a decrease in ELA and math scores statewide at all

grade levels, especially the scores in the ELA. It is possible that many teachers are still learning how to advance their students to meet the rigorous cognitive demand of the new set of standards, especially now the content area teachers are required to teach the literacy skills under the new standards. Teachers need continuous professional development to incorporate and teach the literacy skills, such as reading, writing, speaking and listening skills to deepen students' content knowledge as required by the new state standards.

Researchers, such as Visser, Coenders, Peters and Terlouw (2012) agreed that the key to successful implementation of an educational innovation was to have a professional development program that meets the needs of teachers and students. The collaboration between literacy, ELA teachers and content area teachers will help identify the literacy pedagogical content knowledge essential to enhancing the student learning in the complex reading and writing in the content areas (Fang, 2014). Continuing using the TAP On-going Professional Growth of the cluster group meeting structure with added differentiated components will address teachers' needs for professional learning to improve student learning.

Review of the Literature

I focused the literature review on the following areas: teacher professional development, collaborative inquiry, reading process, reading components, literacy development, and content literacy. Walden online library, Google Scholar, Crossref.org, and books were the major sources for the search. The key words used for the search included *teacher professional development, professional learning community, literacy development, reading program, and content literacy development*. More than 25 peer

reviewed articles were found for the literature review. All articles found are relevant to and provide the rationale for the proposed project.

Teacher Professional Development

Bolam (2002) defined professional development as the continuous growth of one's knowledge and skills throughout his or her career in the field of education. Professional development has long been utilized for teacher learning (Dixon, Yssel, McConnell, & Hardin, 2014; Soine & Lumpe, 2014; Visser, Coenders, Peters, & Terlouw, 2013) and to advance the change in policy, curriculum, and teachers (Barrett, Cowen, & Troske, 2015; Petrie & MacGee, 2012; Whitworth & Chiu, 2015). Avidov-Ungar (2016) classified the purposes of professional development into four different paradigms: the intended process of addressing deficiencies in teacher's performance, the process of personal growth to advance one's expertise in the field of education, the vehicle for the implementation of a school reform, and the solution to "an extensive problem", such as improving student academic performance (p. 655). Despite the purposes of the teacher professional development programs, the common goal of all teacher professional development is to "bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students" (Guskey, 2002, p. 381).

Regardless of the general perception of teacher professional development to advance teachers' knowledge and skills and to impact student achievement, some researchers questioned the effectiveness of most professional development programs. Yoon, Duncan, Lee, Scarloss, and Shapley (2007) analyzed more than 1,300 existing

studies on the link between teacher professional development and student achievement. These researchers found only nine studies met the research evidence standards set by the What Works Clearinghouse. Although small in scale, eight out of nine of these studies showed the result of a 21 percentile points increase in student achievement after extensive (an average of 49 hours) teacher professional development hours (Yoon et al, 2007). However, the impact of the teacher professional development on student achievement was inconclusive because of the small scale and limited studies. Two experimental studies sponsored by U.S. federal government on well-designed teacher professional development programs did not show positive results on student achievement either in early reading or in math (Garet et al., 2008; Garet et al., 2011).

Nevertheless, later studies exhibited more encouraging results of the effect of teacher professional development on student achievement (Biancarosa, Byrk, & Dexter, 2010; Saunders, Goldberg, & Gallimore, 2009). Saunders et al. (2009) used a quasi-experimental design to study the effect of a certain type of professional development, job-embedded grade level collaborative team, on student achievement. Saunders et al. concluded that the student achievement can be increased if the collaborative teams were provided an opportunity to meet during school hours and follow the protocol to solve problems related to the student learning. In 2010, Biancarosaet et al. (2010) found the Literacy Collaborative coaching significantly increased the student value-added scores. Based on a meta-analysis study results by Hattie (2012), professional development is a strategy which impacts student learning and has an effect size of 0.51. Professional

development programs can be effective so long as they are characterized as supportive, job-embedded, instructional-focused, collaborative, and on-going (Hunzicker, 2011).

Collaborative Inquiry

Collaborative inquiry is viewed by researchers as a dominant structure for teacher professional development in recent years. (Butler & Schnellert, 2012; Butler, Schnellert, & MacNeil, 2015; Deluca et al., 2014). By examining resources from the literature related to collaborative inquiry using a scoping review method, Deluca et al. (2014) characterized the collaborative inquiry as a cyclical process which involves different stages to allow teachers to have shared dialogues, to solve problems related to school improvement by taking action steps, and to reflect on the actions taken and the inquiry process. However, based on different studies, the stages of the collaborative inquiry process could vary greatly from 3 to 11 stages (Deluca et al., 2014). For example, Lipton and Wellman (2012) developed a three-stage process to guide teachers through the collaborative inquiry process to analyze student achievement data while Ciampa and Gallagher (2016) engaged teachers in a four-stage collaborative inquiry process for co-planning and implementing literacy instruction in the classroom. Despite the differences in the number of stages, the cyclical processes are used to facilitate the three main structures of collaborative inquiry: dialogical sharing, taking action, and reflecting on practices (Deluca et al., 2014).

An on-going supportive mechanism is needed to facilitate the meaningful collegial dialogues and the implementation of the action steps resulting from the collaboration during the inquiry cycles (Clauset & Murphy, 2012; Deluca et al., 2014).

Norms, protocols and research informed materials can be used to initiate and guide the collegial dialogue among teachers (Deluca et al., 2014; Lipton & Wellman, 2012). Supportive infrastructure in the school environment and leadership are also essential to a successful collaborative inquiry process. The supportive leadership includes a facilitator and teacher leader who can ensure the focus and goal of the collaborative inquiry process (Clauset & Murphy, 2012). The supportive environment includes the structured time and space during the school operating hours where the collegial dialogue is happening. A functional supportive mechanism can safeguard the collaborative inquiry process to achieve the intended goal of the process (Deluca et al., 2014).

There were documented empirical supporting evidence for benefits of collaborative inquiry to teachers, student learning, and the school community (Ciampa & Gallagher, 2016; Clauset & Murphy, 2012; Forey, Firkins, & Sengupta, 2012; Kennedy, Deuel, Nelson, & Slavit, 2011; Nelson, Slavit, & Deuel, 2012; Slavit, Kennedy, Lean, Nelson, & Deuel, 2011; Windschitl, Thompson, & Braaten, 2011). Ciampa and Gallagher (2016) found teacher involvement of a collaborative inquiry literacy project supported and maintained the self-efficacy of these teachers. Forey et al. (2012) documented a collaborative inquiry project which involved various stakeholders in the school community with a university to develop a writing pedagogy to help students with learning disabilities increase their writing skills. However, the empirical supports stated above were either qualitative or case study. More quantitative studies need to be conducted to substantiate and generalize the benefits of the collaborative inquiry on a larger scale.

Content Literacy Instruction

The emphasis of literacy learning is different for students in primary grades and for students in upper elementary levels to secondary levels. While learning to read is the focus for K-3 students, reading to learn should be the attention for students from fourth grade to high school (Goldman, 2012). Learning to read involves students being able to master the foundational skills of reading, such as decoding skills for word recognition and reading fluency skills (Duke & Block, 2012). Reading to learn requires students to move beyond these reading foundational skills to acquire information from the reading (Goldman, 2012). Goldman (2012) stated that "to be literate today means being able to use reading and writing to acquire knowledge, solve problems, and make decisions in academic, personal, and professional arenas" (p.90). However, based on the most recent test results from NAEP, one-third of fourth grade students did not reach the basic level of reading proficiency (NCES, 2011). More than 70% of students from Grades 4 to 12 were not proficient in reading and writing in academic content areas (NCES, 2011). The challenge many educators are facing is to teach students using the acquired literacy skills to gain information from different content areas. Based on the Common Core State Standards, the newly revised state standards for career and college readiness require students to develop the literacy skills in history, social studies, science, and technical subjects. However, the prevalent practice of the content area teachers is only to focus and teach the content instead of the literacy practices of the content areas.

Goldman (2012) stated, "students need specific instruction as they move through school to master more complex texts and new comprehension tasks" (p. 91). The specific

instruction and the new comprehension skills are the keys for the content literacy skills for students to "read, write, think, and reason with text in discipline-specific ways" (Fang, 2014, p. 446). Researchers established that each content area has its own lexicon and its unique way of how the knowledge is constructed and what counts as evidence for the specific content area (Fang, 2012, 2014; Goldman, 2012; Ming, 2012; Shanahan & Shanahan, 2014; Stahl, 2014). It is essential for teachers in the content areas to teach the literacy skills within the specific discipline to students so that they will be able to gain, process, and produce information successfully in each academic content area. Content literacy is not only the key to the academic achievement for students of 4th to 12th grades, but also a necessity of future participation in the society for them.

Upon reviewing the research evidence of content literacy, Fang (2012) synthesized four different approaches to content literacy based on their underlying theories, assumptions, and recommended practices. The four different approaches to content literacy are: the cognitive approach, the sociocultural approach, the linguistic approach, and the critical approach. The summary of Fang's synthesis is provided in Table 23. Although these different approaches have their own theoretical bases and assumptions which lead to different classroom practices, Fang suggested teachers use a combination of approaches to adjust their classroom instruction to meet the learning needs of students to achieve their learning goals.

Table 23

Fang's (2012) Synthesis of Approaches to Content Literacy

Approaches	Cognitive	Sociocultural	Linguistic	Critical
Theories	Cognitive theories	Sociocultural theories	Linguistic theories	Critical theories
Key Assumptions	Cognitive requirements for reading/writing are the same in all content areas. Cognitive strategies help students to extract, process, and retain the information in specific content areas.	Literacy is complex process involving not just cognitive but also social and cultural dimensions. Student's cultural practices and social background can be used as a bridge and resources for promoting content literacy.	Each content area has its specific language patterns that construct the specialized knowledge in the content areas and students need to be taught explicitly about the language tradition in the specific content areas to be successful.	All texts are value laden and readers need to be aware of the author's intention and the historic-political context of the text to fully understand and comprehend the text.
Recommended Practices	Teach students strategies such as predicting, inferencing, monitoring, summarizing, concept mapping, and note taking to obtain, process and retain information from the content areas.	Build connection between home/community and school to motivate and engage students in content areas learning. Integrate culturally relevant and meaningful practices and activate the prior knowledge of students for content area learning.	Teach academic vocabulary and specific language patterns of the specific content area to students explicitly.	Engage students in analyzing texts and confront the values, prejudices, and ideologies in the texts.

While Fang (2012) looked for approaches through the research evidence in literature, Ming (2012) derived 10 common strategies to content literacy through teaching content literacy to graduate students at a university. These 10 strategies include ensure authentic writing, foster collaboration, encourage discussion, use graphic organizers, incorporate relevant text, model think alouds, allow visual representation, include visuals, teach visualization, and integrate engaging vocabulary. Under each strategy, Ming developed differentiated applications for teachers in the content of art, mathematics, music, and physical education. Each strategy lends itself to one or a combination of the approaches described by Fang. For example, authentic writing, using graphic organizers, and modeling think alouds to students are rooted in the cognitive approach. However, discussion can be both a sociocultural and a critical approach. Therefore, the key to effective approaches to content literacy relies mainly on meeting the needs of students.

Project Description

Based on the findings of the study, the professional development was chosen to meet the teachers' needs of expanding their subject matter content knowledge under the current rigorous demands of the new standards to prepare students for career and college readiness. The goal of this professional development plan is to invest time and efforts using the collaborative inquiry cycle to improve the quality of teacher content knowledge to meet the cognitive demand of the new standards, to practice effective instructional strategies based on the needs of students, and to continuously improve student learning results. The plan was designed to provide a continuous, cyclical learning model which aligns with the district vision and mission statement using collaborative process.

District professional development teams will be formed at both the elementary and secondary levels as the collaborative effort for developing the needs assessments yearly and implementing the professional development planning cycle. The district professional development team will include representatives from each school at the elementary level (Grade K-6th) and the secondary level (Grade 7th through 12th). The decisions of the professional development plan will be data driven and research based on best practices in teaching and learning. The data points for the professional development will include student achievement data from the state assessment as well as the district Galileo assessment, teacher needs assessment data, teacher evaluation data, and teacher reflections and survey from the previous professional development training. The collaborative district professional development team will examine the data points each year to determine the goal for professional development each year based on the emerging needs of the data from both teachers and students. The different data points will be used to determine the focus for the professional development is shown in Figure 12.

The process of the professional development planning cycle will be:

1. Identify the district professional development goals which align with the district strategic planning goals.
2. Create the action plan for the strategies and activities for the professional development throughout the school year.
3. Implement the planned professional development strategies and activities through weekly cluster group meetings.

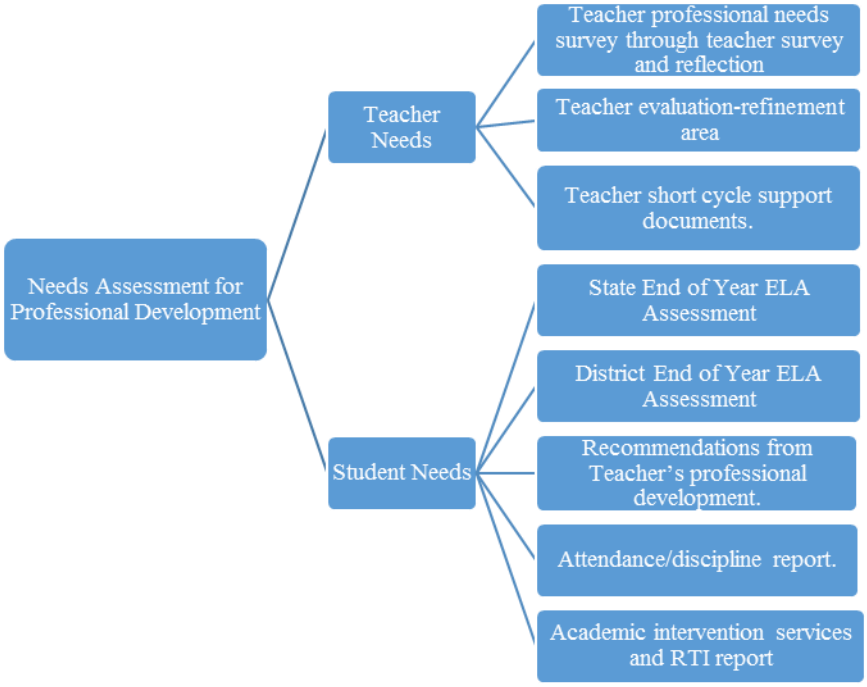

Figure 12. Needs assessment for professional development.

4. Continue to monitor progress of the professional development at the classroom levels by the school leadership team.

5. Review student assessment data and teacher reflections and insights of the current year professional development to plan the professional development goal and activities for the following year.

The planning cycle is shown in Figure 13.

District Professional Development Planning Cycle

The cycle will continue using the collaborative inquiry process (Tipton & Wellman, 2012) to examine the data and to determine the professional development goal each year thereafter to refine teacher's practices and to meet the learning needs of students. The professional development team will meet the first month of school to

create an action plan based on the district goal and feedback from the teachers at their school sites. The team will meet regularly (at least once a month) during the school year to monitor and adjust the action plan to meet the needs of teachers and students (Appendix A).

Figure 13. District professional development planning cycle.

Project Implementation

The first cycle will start with the findings from this case study, focusing on the professional development for content area teachers to teach the literacy skills required by the AZCCR in History, /Social Studies, Science, and Technical subjects. I will prepare a three-day workshop to introduce the proposed professional development plan, to review the collaborative inquiry process and to explain the rationale for content literacy to the

district leadership team. The school representatives of the team will take the information back to their school sites to facilitate the collaboration and to implement the strategies and steps of the professional development plan. A teacher survey will be completed by the teachers after each collaborative session to serve as a formative assessment for the implementation. The professional development team will meet once a month to discuss the results of the formative assessment and share the insights from the collaborative meeting at each school site, using the plan to monitor and adjust the strategies for the implementation of the approaches of the content literacy site if needed. The team will examine the student achievement data at the end of the school year to determine if the intended outcome and goals of the professional development plan are met. The timeline, expenses, and person responsible for the various tasks are explained in Table 24.

Potential Resources and Existing Support

One of the existing supports for the proposed district professional development plan is the structure of the weekly on-going, job-embedded meeting that has been established at all schools in the district. The structured time for collaboration provides a perfect opportunity for teachers to discuss relevant instructional issues related to the professional development plan. Another existing support is the Balanced Literacy program at the elementary levels. The Balanced Literacy program helps build the foundational skills for literacy learning at the elementary school levels. With proficient foundational literacy skills, students can make the transition to “reading to learn” easier with the proper support from the content area teachers.

Table 24

Proposed Timeline and Funding for the Professional Planning Cycle

Task	Timeline	Expenses	Person Responsible	Evaluation/Follow up
Identify professional development goal	1st week of July	Extra duty pay for team members to meet outside of contract time and discuss the goal	Associate Superintendent	SMART goal for PD plan
Create the action plan for strategies and activities for professional development	3rd week of July	NA	Associate Superintendent & District PD Team	Detailed PD plan for the entire year
Implement the professional development strategies and activities through the cluster group meeting and/or workshops.	End of July and throughout the school year	$50,000 for external facilitators (as needed)	District PD Team	Teacher PD evaluation form
Monitor progress of the professional development activities	Throughout the school year	$5,000 for materials	Academic coaches	Walkthrough field notes
Review student assessment data and teacher reflection of PD activities	May 1- May 30	NA	Members of the PD team & academic coaches	Student achievement data Teacher needs assessment for PD

The academic coaches at each school site also provide additional instructional support and serve as main resources for teachers daily. Other potential resources are the support from the school administration and the district administration, such as school principals, school superintendent, associate superintendent, director of the district federal program, and ESS director. The teachers who received the Reading Specialist Endorsement on their teaching certificates could serve as additional resources for the content area teachers. Furthermore, the district supported web-based differentiated reading program called Achieve3000 could be utilized as a resource and tool by the teachers for students to develop their content areas literacy.

Potential Barriers and Solutions

Potential barriers to the project are the attitudes and mindsets of the content area teachers. The prevalent instructional practice of the content area teachers is only to focus on teaching of the content instead of teaching the content related literacy skills. However, with the collaborative inquiry process and information of the content literacy review, teachers could be led to discover and identify the needs for students to master the literacy skills in each specific content area. Another potential barrier could be the efficacy of the content area teachers in delivering literacy instruction to students. This barrier could lead to reluctant participation of the content area teachers in incorporating the literacy strategies in their classrooms. Nevertheless, this barrier could be countered by teaming the content area teachers with the academic coach or the language arts teachers to co-plan and team-teach the content literacy skills in the classroom.

Project Evaluation Plan

The project is designed to further the vision and goals of the school district and to meet the teachers' need to expand their content knowledge to meet the rigorous demands of the new state standards to prepare students for college and career readiness. The evaluation plan for this project includes both qualitative (teacher perception data) and quantitative measures (student achievement data) to determine the effects on improving teacher content knowledge and student learning. The formative and summative assessment are built into the professional development planning cycle to determine the effectiveness of the plan.

Formative evaluation will be conducted during the third stage of the district professional development planning cycle right after implementation of each action step (see Figure 4). The results of the formative assessments will be used to monitor and adjust the action steps or to gauge the future professional development needs to ensure the goals and objective of the plan are met, which include teacher survey of the professional development conducted.

Needs assessment at the end of the planning cycle examines both student achievement data, the summary of the teachers' perception data, and teacher evaluation data at the end of each school year serves as the summative evaluation to determine the effectiveness of the current year professional development plan and the professional development goal for the upcoming year. The relationship of PD learning activities and the evaluation is demonstrated in Figure 14.

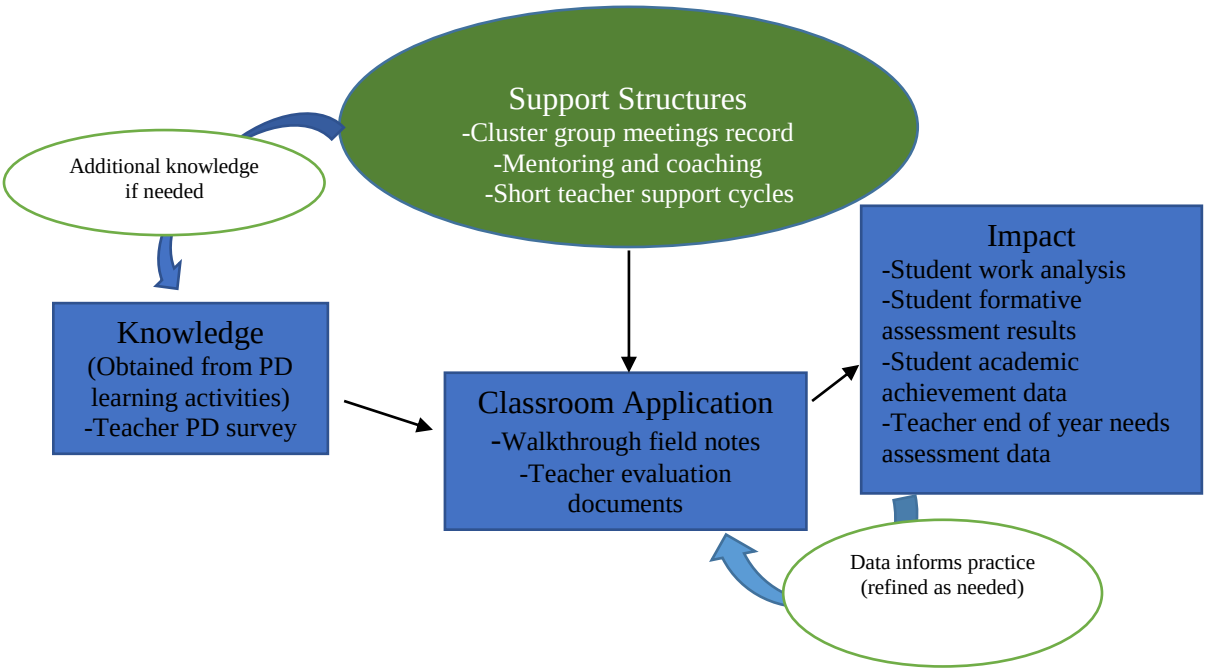

Figure 14. PD learning activities and evaluation plan flow-chart.

The key stakeholders of the project will be the members of the district professional development team. The team members are not only responsible for the planning but also the implementation of the district professional development plan. Other key stakeholders include the district leadership such as school superintendent, associate superintendent, and data analyst/staff developer for technical support. The Federal program director will be the stakeholder who provides the fiscal support for the project. Teachers, students and their parents are also key stakeholders of the district professional development plan who will be impacted directly.

Project Implications

The implications of the project will be discussed at the level of students and the level of teachers. At the student's level, the social change for the implementation of the content literacy professional development project will help students become more

successful in learning the specific contents and in turn foster their language skills at the same time. With increased content literacy skills, students will be more motivated to learn and to engage themselves with the content area learning, thus further narrowing the achievement gap.

The positive social change for teachers is to move from working in isolation in each individual classroom to working collaboratively with each other. Every teacher in the same discipline will meet regularly to examine different approaches to the content literacy, to discuss and decide which content literacy strategies to incorporate in the classrooms that best meet the needs of the students, and to share and reflect on the strategies used in the classroom. By way of collaborative inquiry, teachers analyze student data, examine their own assumptions about student learning and their own professional learning, brainstorm solutions for the problem in the classroom, and to improve the learning for their students and for themselves.

Conclusion

In this section, I proposed a district professional development plan with a recurring planning cycle based on the collaborative inquiry model. The plan involves continuous improvement of student learning and quality of classroom instruction. The first cycle of the professional development plan will focus on the content literacy for the teachers and paraprofessionals from the upper elementary levels to the secondary levels. First, the district leadership team will be informed of the proposed district professional development plan and the rationale for the content literacy focus. The members of the leadership team will take the information back to their school sites and facilitate the

implementation of the professional development plan with the content literacy focus using the collaborative inquiry process and the TAP cluster group meeting structure. The cycle will continue, and the decision for future professional development plans will be based on the emerging needs through the needs assessments at the end of the school year and the on-going formative evaluations throughout the school year after each implementation of a strategy.

In the next section, I will examine the strength and limitation of the project in addressing the problem. In addition, I will also discuss another alternative in addressing the problem based on the work of the study. I will reflect on my own growth as a scholar, as a practitioner, and as a project developer through my study and reflect on why the work is important. Lastly, the positive social change of this study and directions for future research will also be addressed in Section 4.

Section 4: Reflections and Conclusions

Introduction

The intent for conducting this case study was to provide insights from the perspectives of the teachers to discover the value and any positive social change that emerged from the process of implementation of the TAP on a native reservation in the southwest region of the United States. The qualitative data of my case study revealed that the participating teachers enjoyed the collaboration with their colleagues during the weekly cluster group meeting. The job-embedded, on-going weekly meeting provided an opportunity for teachers to examine student achievement data, to identify the learning needs of students, and to learn new instructional strategies to implement in the classroom to meet the needs of students and hence to improve the academic achievement of students. However, teachers expressed the needs for more differentiated content area training. This project offers the content area teachers more time to collaborate and to implement the specific literacy strategies to improve the student learning in the content areas.

In this section, I will discuss the strengths and limitations of my project and an alternative approach to remediate the limitation of the project. I will focus my discussion on what I have learned through the process and development of the project, reflecting on my learning as a scholar, practitioner, and project developer. I will discuss the potential impact on social change of this project and implications for future research.

Project Strengths and Limitations

Strengths

The biggest strength of this project is that it is aligned with the district academic goal of making continuous improvement in student academic achievement by closely examining both quantitative and qualitative data at the district. By analyzing the results of student outcome and various data, the teachers will be able to find solutions and refine their practices with laser-like focus in their classrooms to impact student learning. The district will be able to move forward and advance its academic goal through this project because of the alignment. The project is built on a cyclical, collaborative process for improvement, which aligns with the belief system of the district in a life-long learning process, using collaborative efforts to make continuous improvement.

Another strength of this project is that it takes advantage of the current job-embedded, on-going cluster structure to help teachers learn new content knowledge required by the Arizona College and Career Readiness Standards (AZ CCR) and the underlying pedagogical strategies. The content literacy strategies from this project are differentiated based on what is specific in various disciplines. With the built-in classroom support and follow up of the TAP structure of the academic coach and leadership team, the content literacy strategies can be implemented and supported at each school site.

Lastly, the content area literacy plan fills the gap in district resources and supports for literacy development between the elementary level and the secondary level. For example, there are many different programs in the district that support the early literacy

development at the elementary level, such as Zoo Phonics, 100 Book Challenge and the School Pace online program, IXL K-6 Language Arts (a web-based program), Achieve3000 (a web-based differentiated reading program), and the Balanced Literacy program. However, there are only the Achieve3000 and Read 180 programs (for reading remediation) for students at the secondary level. The school wide content literacy plan will help students at the secondary level learn the content area literacy skills so they can have the knowledge in the content areas reading and be successful in their academic pursuits.

Limitations

The limitations for this project will be the availability of resources and supports needed from the district. The priority for literacy development in the district is to build the early literacy skills at primary grades because of the mandate from the state requiring that any third-grade students who do not pass the state reading assessment will not be promoted to the next grade (ARS15-701). The district allocated resources and funding for early literacy development over the past two years to meet the mandate from the state. The district adopted and purchased an entire Zoo phonic program for the district K-3 Programs. The district also purchased more books for the 100 Book Challenge Program (for independent reading) and the School Pace Online program to maintain the Reading Lexile data from the 100 Book Challenge Program. With the K-3 literacy development priority, there are very limited resources and supports for the content area reading materials, such as content area trade books, supplementary texts, or even new textbooks in various content areas.

Recommendation for Alternative Approach

The alternative approach for this project is to conduct field testing on all the recommended strategies through the study of the content literacy before these strategies become the new learning in the cluster group meeting. Field testing is one of the many responsibilities of an academic coach. It provides the opportunity for the academic coaches to test the strategies and to make the necessary modifications to fit the needs of the local students (NIET, 2016). Additionally, it also provides an opportunity for academic coaches to determine the critical attributes of the instructional strategies that must happen in the classroom to make the strategies effective based on the student work analysis and student achievement data collected during the field testing. It was an area that was ignored by most schools because of the time constraint during the school year. Vetting the content area literacy strategies prior to the introduction of these strategies to the teachers will increase credibility and effectiveness of the strategies in improving the student achievement with actual evidence so the teachers will not have doubts of the implementation of these strategies in their classrooms.

Scholarship, Project Development and Evaluation, and Leadership and Change

I have learned many valuable lessons through this long and arduous journey. I started out the journey with a love of learning and the dream of being in the world of academia. I did not anticipate all the difficulties and obstacles along the way. Through the encouragement and supports from the members of my committees, other fellow doctoral students and instructors from Walden, I learned the virtue of being humble, because I found the more I learned, there was a lot more I still needed to know. My

patience has been tested numerous times, and I learned how to persevere and never give up. I also learned how to be a problem solver every step of the way. I will reflect on the learning as a scholar, as a practitioner, and as a project developer in the following sections.

Self-reflection as a Scholar

The first challenge I faced as a scholar was to conduct in-depth research for the literature review. First, I had to reach the required saturation of my research topic to find enough resources and references within the most recent five years. Next, I was required to organize and synthesize the information from the in-depth research in a meaningful way for me to be able to communicate my ideas to others.

The next challenge and learning opportunity was the APA format. I vaguely remember I used the MLA style of academic writing for my graduate study. There is a big gap, 20 years to be exact, between the studies for my master program and doctoral program. However, I did have APA academic writing practices while I was earning my Educational Specialist degree at Walden, during which time I went through the transition from the APA 5th Edition to the APA 6th Edition. It is very hard for me to remember all the requirements from the APA 6th Edition style since it is not the writing style I use for daily communication with others.

The most valuable lesson I learned through the journey of my doctoral study was that I had to always prepare myself with the unforeseeable, especially during the data collection process. I also had to deal with the fact that sometimes my priority was not necessarily the priority of my participating teachers, so I learned to practice patience and

perseverance to obtain my goal and at the same time to be flexible to accommodate the needs of my participants.

Self-reflection as a Practitioner

Time management was the most valuable lesson I learned as a practitioner. My job as an academic coach (master teacher) at a TAP school is very demanding. I am required to attend trainings and meetings at the district level, and conduct cluster group meetings and professional development for teachers at the school site. Occasionally, I also conduct professional development at the district level. I conduct walkthrough observations and give feedback to teachers regarding their instructional practices. I also analyze and provide the students' achievement data, including the formatives, benchmarks, as well as the state assessment results for the teachers so the teachers will use the results to adjust their instruction in the classrooms to meet the needs of their students. I had to maintain all teachers' evaluation documents as well as all the meeting records. I worked well past the contracted time and still had to bring work home with me often. When I did that, I cut into the time for my own study. However, I have been able to use the knowledge I gained through my study to enhance the work I am doing as a practitioner at school. Therefore, my study is connected to my work in a meaningful way through which I constantly bring new understanding to the teachers at my school as well.

Self-reflection as a Project Developer

As an academic coach/master teacher, I have developed professional development workshops for the teachers at both the school and district levels. I followed a format that I used for the development of this project. First, the need for the development must come

from some sort of data. In this case, the need for a professional development plan on the content literacy came from the results of my study. Based on the identified need and the district students' state reading assessment results, I determined the desired outcomes of the project. Once the goal and purposes of the project were decided, I started my research for the new learning, synthesizing and organizing the information in a format which I could disseminate to the district leadership team.

As I developed the project, I realized the new learning of the content area literary needed to be built on the most successful structure of the On-going Professional Growth of the TAP element. Therefore, I incorporated the component as one of the cycles for monitoring the implementation of the content area literacy. The facilitation of the collaborative inquiry process can ensure the ownership of the implementation and the fidelity of the implementation of the project.

Self-Reflection on Leadership and Change

As an instructional leader at the school level, I learned not to expect overnight success. Change is a gradual process that needs to be carefully fostered through my daily practices. I learned that as a leader, I needed to celebrate every small step of victory and success of teachers and students and continue to encourage them to move forward. Once the success was reached by the critical mass, the rest of the teachers and students would follow. I also learned how to use evidence, such as student achievement data and actual anecdotes from classroom observation, to start the conversation with teachers about their classroom practices. Finally, I learned it was important to be open minded and consistent

about the expectations of the implementation to the teachers and yet also consider the needs of teachers as well.

Reflection on Importance of the Work

The impact of the project on social change for teachers is to change the old practice of teachers working behind the closed door in isolation to continuously working in teams to improve the learning for students. When teachers work collaboratively and obtain the new learning that has direct connection to their classroom instruction, they can make a difference in the academic achievement of their students. The focus on the outcome of the student achievement result determines the need for adjusting instruction in the classrooms to meet the needs of students. The project will equip teachers with the strategies that help students get access to the content area knowledge needed to be successful in their future.

The potential impact of this project is on the student academic achievement in reading for the upper elementary and secondary level students. The students will have the opportunity to learn about the language and specific evidence used in each content area so they will have the tools necessary to unlock the mystery from the content area texts, ensuring their success in learning the knowledge required to be college and career ready. Once the students master the content areas literacy skills, not only may they perform well on the new state reading assessment, they may also be prepared for the future demands of either work place or further academic pursuit.

Implications, Applications, and Directions for Future Research

As I researched the literature to establish the cause and effect relationship between the TAP and student academic achievement, I found that many studies were of qualitative design. The quantitative studies which applied the quasi-experimental designs I found with regards to effectiveness of the TAP program (Eckert, 2013; Hudson, 2010; Mann et al., 2013) did not meet the group design standards from U.S. Department of Education of What Works Clearinghouse (WWC). According to the WWC, the reason for not meeting the requirement for group design standards was that the intervention group and comparison group in these studies were not equivalent (Eckert, 2013; Hudson, 2010; Mann et al., 2013). Further study is recommended to conduct a quasi-experimental design with equivalent comparison and intervention groups to more clearly establish the cause and effect relationship between the TAP and increased student academic achievement (WWC, 2015).

Another direction of the future study could be a longitudinal case study design using mixed-methods to investigate both qualitative and quantitative data of a school implementing the TAP program. The longitudinal data can provide more detailed chronicled information about the TAP implementation and see how it transforms a school. This type of study would also provide information about how the TAP program evolves to meet the changing demands of the world.

Conclusion

In this section, I provided discussion about the strengths and limitations of the project. Subsequently, I reflected on learning and growth as a scholar, a practitioner, a

project developer, as well as my leadership throughout the doctoral project study. The final session focused on the social change for teachers and the potential impact on student achievement of the project. Lastly, I recommended two possible directions for study in the future.

The doctoral project was designed to provide a continuous cycle for improvement and life-long learning for teachers by analyzing various types of data and utilizing the existing structure of the cluster group meeting, which is the strength from the TAP implementation, to further the district goal of academic excellence for students on the reservation. I designed this project by building on the teachers' strengths, which was the most rewarding experience from the teachers, to deliver the new skills and strategies for teachers to learn and implement in the classroom. The collaboration and discussion of the strategies in the cluster have been able to help teachers to clarify the strategies learned from the cluster group meeting if they have any questions regarding the implementation. The collegial collaboration could also help teachers to figure out how to incorporate the strategies into the current standard the teachers are teaching by co-planning a lesson together.

The current teacher support from the academic coaches and mentor teachers will ensure the implementation of the content literacy plan at the secondary levels in the content area classrooms by demonstrating lessons, following up with the teachers in the classroom, and giving feedback to teachers' instruction in the classroom after an observation. With the focus on both early literacy and content area literacy, the teachers in the district will be able to prepare the learning needs for both elementary and

secondary students by building a solid foundation of reading foundational skills at the elementary level and teaching specific content area reading strategies for students to access the content area knowledge with ease at the secondary level. When students are equipped with solid reading foundational skills and the skills to navigate the content knowledge from the content area reading, they will be college and career ready and be successful later in life.

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Appendix A: The Project-Part1

Proposed District Professional Development Plan

District Vision

"Our vision is to empower all students to be ***Competitive***, ***Unique***, ***Successful,*** and ***Driven*** through an **effective** team of teachers, staff, school board, parents, and community in an environment dedicate to the value of ***continuous learning."***

Mission

"The mission of the Chinle Unified School District is to work as partners within the community, promoting lifelong learning in a multicultural and global environment to serve as a strong foundation for all students".

Overview

Purposes

The purposes of this professional development plan are to invest time and effort using the collaborative inquiry cycle to

1. Improve the quality of teacher content knowledge to meet the cognitive demand of the Arizona Standards for College and Career Readiness.
2. Provide Opportunity for teachers to practice effective instructional strategies based on the needs of students.
3. Continuously improve student learning results.

Description

The plan was designed to provide a continuous, cyclical learning model which aligns with the district vision and mission statement using collaborative process. A complete cycle of the professional development plan includes five different steps and lasts over a span of one year to provide on-going, job-embedded professional learning that is connected to the student learning in the classroom, to teachers, and para-professionals.

The process of the professional development planning cycle includes five different steps:

1. Identify the district professional development goals which align with the district strategic planning goals.

2. Create the action plan for the strategies and activities for the professional development activities throughout the school year.

3. Implement the planned professional development strategies and activities through weekly cluster group meetings.

4. Continue to monitor progress of the professional development at the classroom levels by the school leadership team.

5. Review student assessment data and teacher reflections and insights of the current year's professional development to plan the professional development goal and activities for the following year. The professional development cycle is described in Figure 1.

Figure 1. District professional development planning cycle

District Contacts for the Professional Development Plan

Mr. Quincy Natay, School Superintendent

Mr. Clauschee, Associate Superintendent of Curriculum and Instruction

Ms. Betz, Director of Federal Project

Ms. Mitchell, Data Analyst/Staff Developer

District Professional Development Planning Team: TBD

Rationale

Alignment to District Goals

The academic goal for the district of the strategic plan is:

By May of 2020, 90% of students at each grade or subject level will show proficiency in 80% of AZCCRS as measured by state/district standardized testing with incremental increases based on the prior year's performance data to empower our students to be competitive, unique, successful, and driven**.**

Based on the description of the academic goal on the district strategic plan, the cyclical learning model of the district professional development provides opportunities for continuous learning and improvement for teachers and para-professionals. The decisions of the professional development plan will be data driven and research-based on best practices in teaching and learning. The data points for decision of the professional development goal will be based on the data from teachers, students, and the results from the previous professional development plan.

Student Achievement Data

Student achievement data includes the data from the state assessment, the district Galileo benchmark assessments, and Galileo pretest and posttest data to determine the student learning needs. Additionally, there are other types of information that could also

be included for decision making, such as student attendance/discipline reports as well as intervention reports from RtI.

Teacher Needs Assessment Data

Teacher needs assessment data will be the information gathered through teacher surveys, the refinement area of the teacher evaluation, and the short cycle teacher support documentations. The different data points that will be used to determine the focus for the professional development are shown in Figure 2.

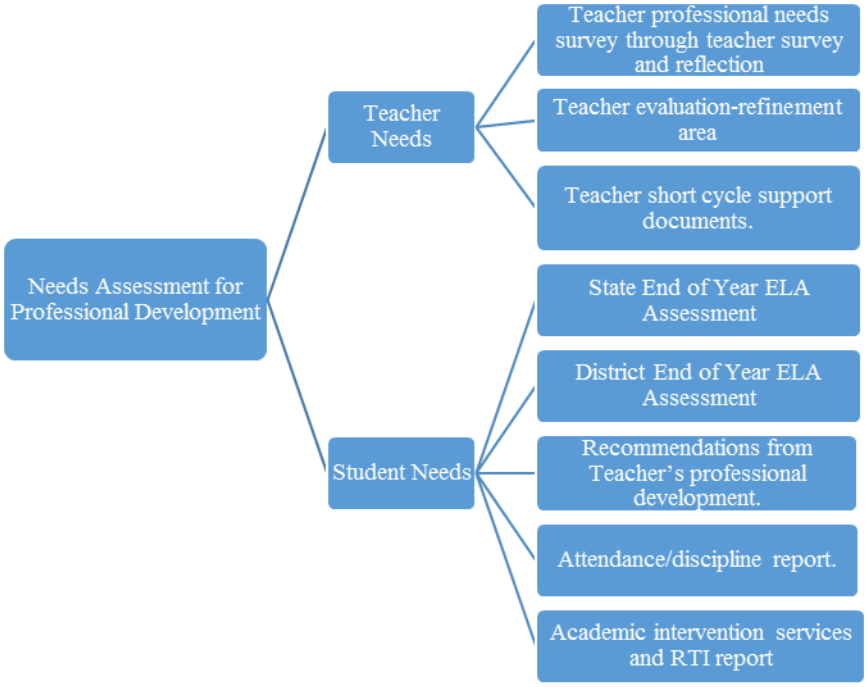


Figure 2. Needs assessment for professional development

Results from Previous Plans

Looking at the implementation and outcome data of the previous professional development plan could help determine if there is a need to revisit the learning experience and to refine the practice further. Additionally, certain activities and professional learning designs in the past could be included in the future professional

development plan if, in fact, they were more effective than others in reaching the goals of the professional development plan.

Professional Development Planning Team

It is proposed to form a professional planning team at the district level. The district professional development team will include representatives from each school at the elementary level (Grade K-6th) and the secondary level (Grade 7th through 12th) to plan differentiated professional development learning activities based on teacher needs. The team members will work closely with the district personnel, such as data analyst/staff developer to analyze different forms of data to inform the decisions of the professional learning plan each year. In addition, the team members are also responsible for creating, revising the PD survey and teacher needs assessment, compiling the survey results, and generating reports from the evaluation of the PD plan.

Proposed Timeline and Funding for the Professional Planning Cycle

Table 1

Proposed Timeline and Funding for the Professional Planning Cycle

Task	Timeline	Funding	Person Responsible	Evaluation/Follow up
Identify professional development goal	1st week of July	Extra duty pay for team members to meet and discuss the goal	Ass. Superintendent	SMART goal for PD plan
Create the action plan for strategies and activities for professional development	3rd week of July	NA	Ass. Superintendent & District PD Team	Detailed PD plan for the entire year
Implement the professional development strategies and activities.	End of July and throughout the school year	$50,000 for external facilitators if needed	District PD Team	Teacher PD evaluation form
Monitor progress of the professional development activities	Throughout the school year	NA	Academic coaches	Walkthrough field notes

Learning Activities and Evaluation

The professional development learning activities are planned based on the current district professional development calendar, which includes three full 301 professional involvement days (PID), and five half days of district PIDs. The weekly on-going, job-embedded cluster group meeting at each school site is the structure for teacher collaboration of the classroom application of the knowledge gained from the professional development learning activities from the PIDs. Another support mechanism for the professional development learning at each school site is the follow-ups and classroom supports provided by the academic coaches. The evaluation of the professional development comes in two different formats: formative and summative. Formative evaluation of the professional plan includes any on-going evaluation of the PD learning activities, such as the PD evaluation form and the walkthrough log, teacher classroom evaluation, student work as the result of the implementation lesson, or teacher self-reflective journal. Summative evaluation includes the end of year student academic achievement data and state assessment data to determine if the professional development goal is met. The relationnship of PD learning activities and the evaluation flow chart is demonstrated in Figure 3.

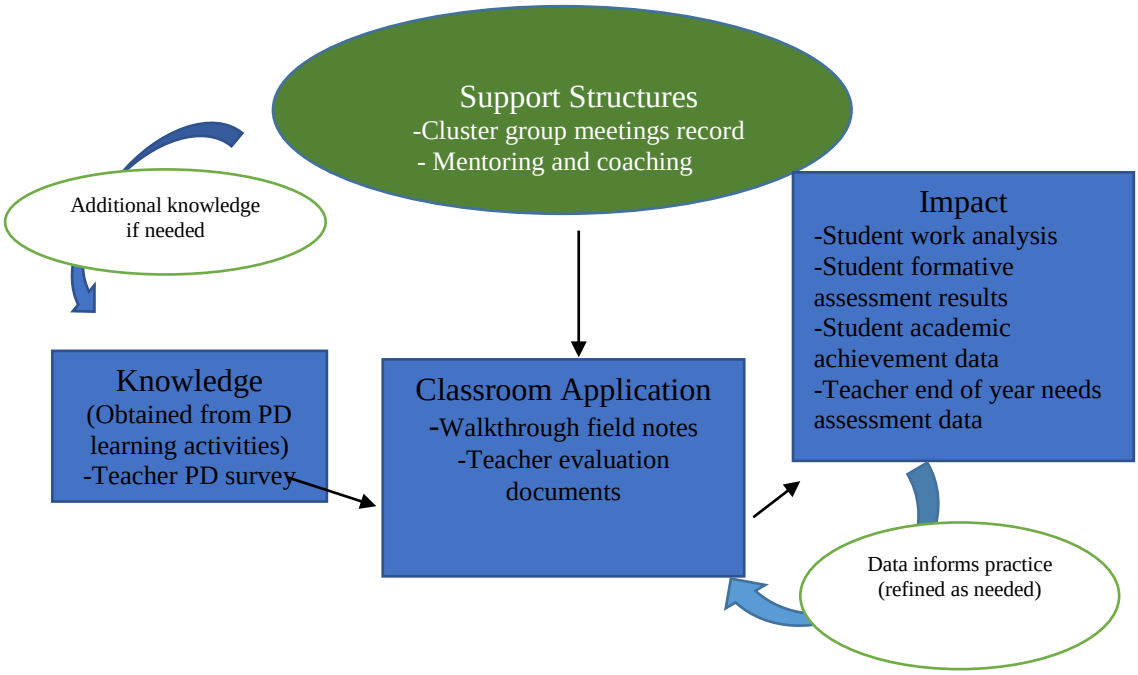


Figure 3. PD learning activities and evaluation plan flow-chart

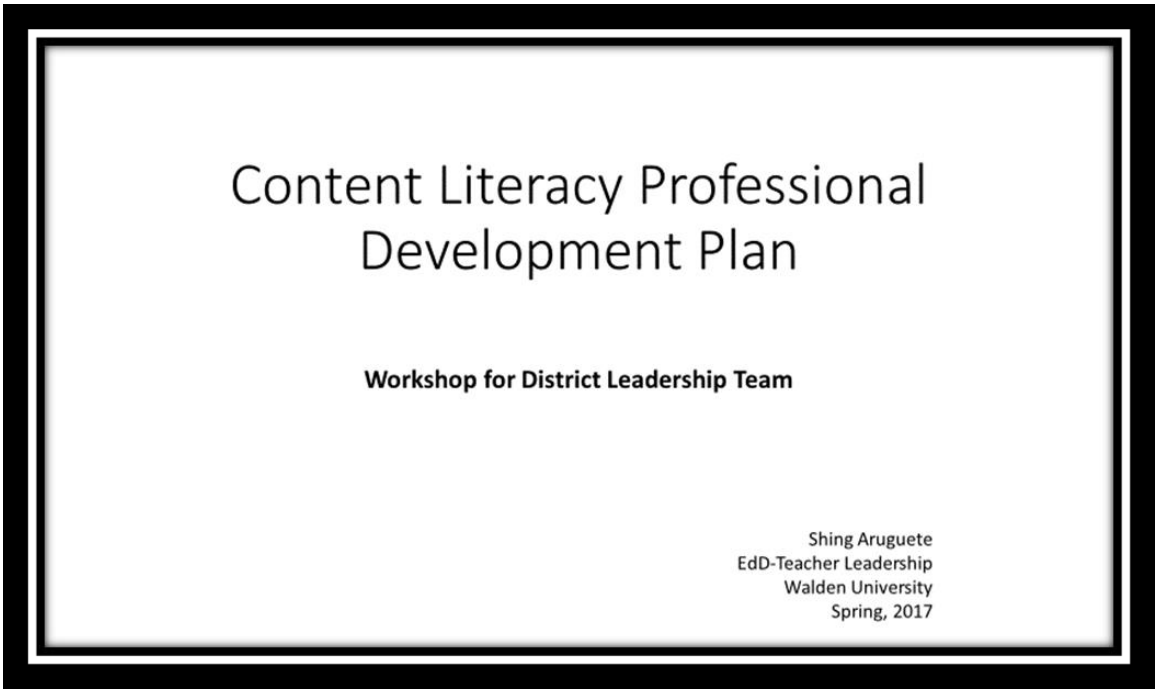
Reflection

The district professional development team will analyze the formative and summative data to answer the following questions:

1. Were the goals of the professional development plan met?
2. What were the factors which contributed to the results? Is there a need to refine the learning further?
3. What will be the focus for professional development learning for next year?

The team will use the information gathered from the evaluation data to generate a report to determine the professional development planning goal for the following year.

The Project-Part II



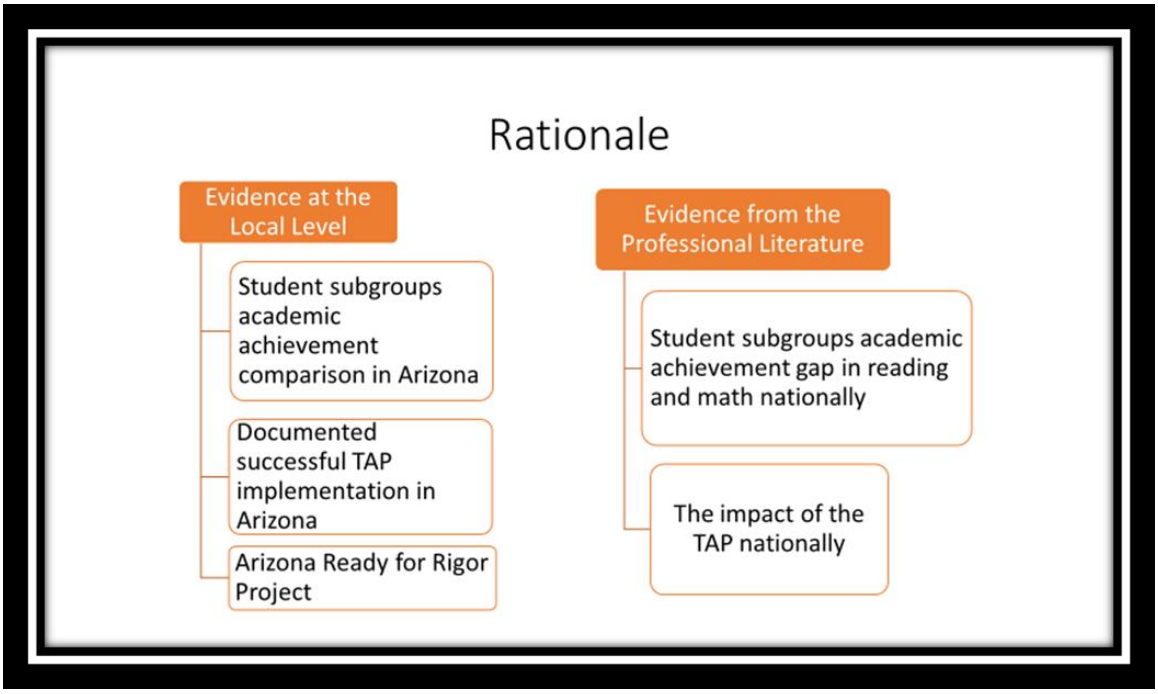
Day 1 Objectives

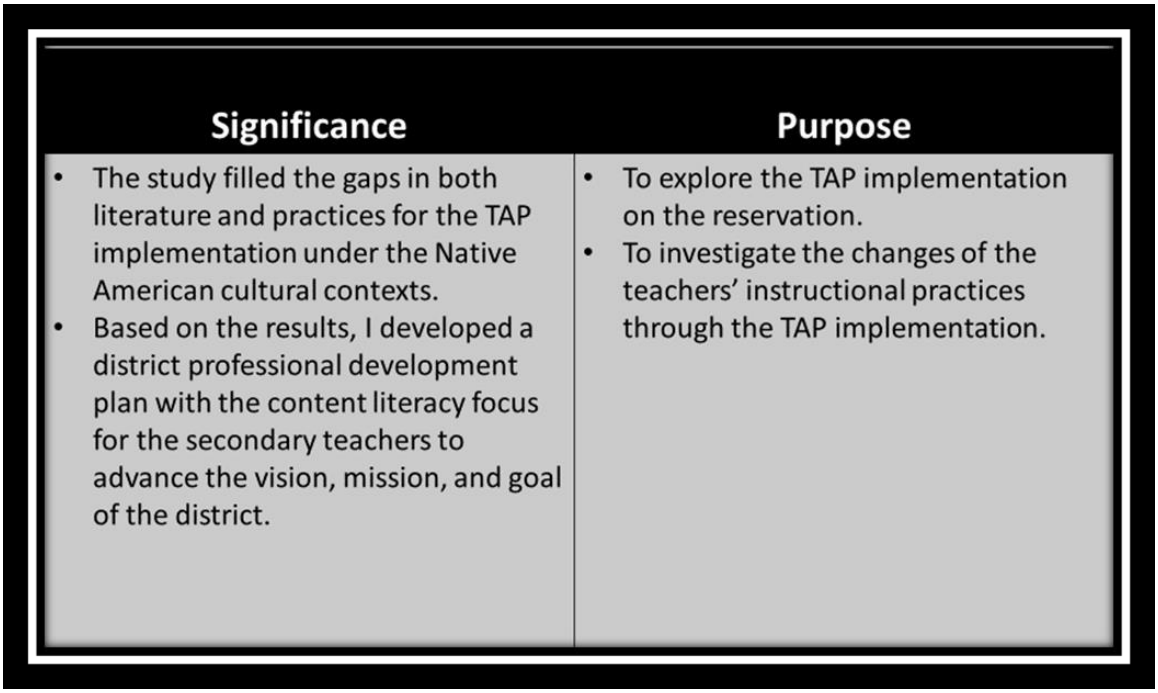
- Participants will learn about the results of a doctoral project study.
- Participants will reflect on the effectiveness of their school team.
- Participants will be able to describe the components of the proposed district professional development plan.
- Participants will complete a content literacy survey via Google Form

A Case Study of the TAP on a Native American Reservation

Problem Statement

- There is a persistent achievement gap between the Native American students and the Anglo and Asian students at the local and national level.
- The school district implemented the Teacher Advancement Program(TAP) in 2011 to improve teacher quality and improve student achievement.
- There is a gap in both literature and practice documenting the TAP implementation on a Native American reservation.


Rationale
Evidence at the Local Level
Student subgroups academic achievement comparison in Arizona
Documented successful TAP implementation in Arizona
Arizona Ready for Rigor Project
Evidence from the Professional Literature
Student subgroups academic achievement gap in reading and math nationally
The impact of the TAP nationally


Significance
The study filled the gaps in both literature and practices for the TAP implementation under the Native American cultural contexts.
Based on the results, I developed a district professional development plan with the content literacy focus for the secondary teachers to advance the vision, mission, and goal of the district.
Purpose
To explore the TAP implementation on the reservation.
To investigate the changes of the teachers' instructional practices through the TAP implementation.

Research Questions

Q 1: How do the teachers perceive the four different elements of the TAP framework?

Q2: To what extent are the experiences of the implementation challenging or rewarding to the teacher involved?

Q 3: To what extent does the TAP process change teachers' instructional practices in the classroom?

Q4: How does the Native American cultural setting influence the implementation of the TAP school reform framework?

Literature Review for the Proposal

Theoretical Framework

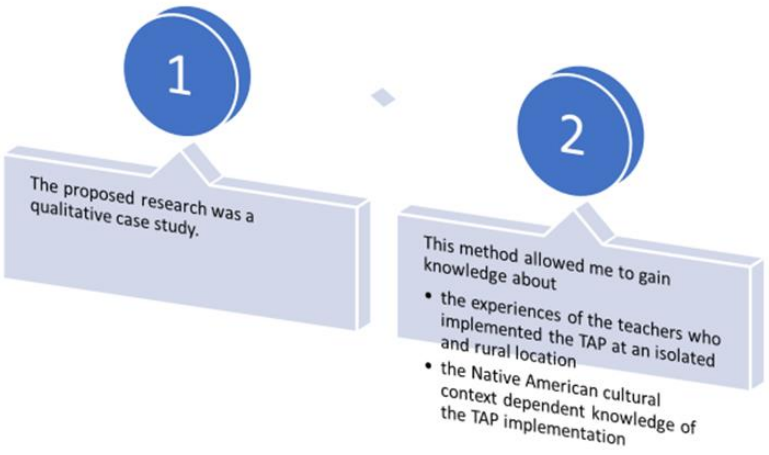
- **Social constructivism.**
- ***Vygotsky (1978).***
- ***Bruner (1996), Wood, Bruner, and Ross (1976).***
- ***Bandura (1989).***

Literature Review of the TAP Effectiveness

The Four Elements of the TAP Framework

- **Multiple career paths.**
- **Ongoing applied professional growth (OAPG).**
- **Instructional focus accountability.**
- **Performance based compensation.**

Research Method and Design



Participants and Sample Size

- The population from which the samples were drawn from: the teachers from two of the K-8 schools, two of the K-6 schools, one junior high school and one high school of the school district of study.
- Maximum (or maximal, Creswell, 2008) variation sampling method was utilized to select the participants from a pool of volunteers from the schools.
- The sample size consisted of 9 participants. As Patton (2002) indicated "qualitative inquiry typically focuses in depth on relatively small samples" (p. 273).

Data Collection

1. Individual In-depth Interview
   - -Semi-structured interviewing questions.
   - -Audio recorded session.
   - -Transcripts of the interview.
2. Classroom Walkthrough Observation
   - -Field notes on the Walkthrough Observational Protocol
3. Document analysis
   - -Teacher's lesson plans.

Data Analysis

- Use of constant comparison and a CAQDAS-Atlas.ti method to analyze the data.
- Use of triangulation: in-depth interview, classroom walkthrough observation, and document analysis.
- Coding methods: simultaneous coding and pattern coding
- Thematic categories and subcategories were developed for the in-depth and walkthrough observational field notes.

Summarized Findings in Relation to Research Question 1

- Please see Handout1

Summarized Findings in Relation to Research Question 2

- Please see Handout1

Summarized Findings in Relation to Research Question 3

- Please see Handout1

Summarized Findings in Relation to Research Question 4

- See Handout1

Rationale for the Professional Development Genre for the Project

- The results of the study indicated that teachers desire more differentiated approaches to meet the needs of their students in the content areas.
- Teachers are required to teach the literacy skills in Social Studies, History, Science, and Technical Subjects under the new AZCCR Standards.
- Use the TAP On-going Professional Growth of the cluster group meeting structure to combine with added differentiated component will address teachers' needs for professional learning to improve student learning.

Components of District Professional Development Plan (Handout 3)

- Overview
- Purposes
- Description
- District Contacts
- Rationale
- Alignment to District Goal
- Student Achievement Data
- Teacher Needs Assessment
- Results from Previous Plans
- District Professional Development Planning Team
- Proposed Timeline and Funding for the Professional Planning Cycle
- Learning Activities and Evaluation
- Reflection

Describing the Seven Qualities of A High Performing Group

1. Maintain a clear focus.
2. Embrace a spirit of inquiry.
3. Put data at the center.
4. Honor commitments to learners and learning.
5. Cultivate relational trust.
6. Seek equity.
7. Assume collective responsibility.

Tipton & Wellman, 2012

Describing the Seven Qualities of A High Performing Group

- The participants will be grouped based on number from 1 to 7.
- Jigsaw the Reading: Participants will categorize examples and non examples
- Present your chart to the whole group.

Collaborative Inquiry Learning Cycle

- Incite the process of inquiry and problem solving
- A three-stage process (Handout 2)
- Group cognitive process

Tipton & Wellman, 2012

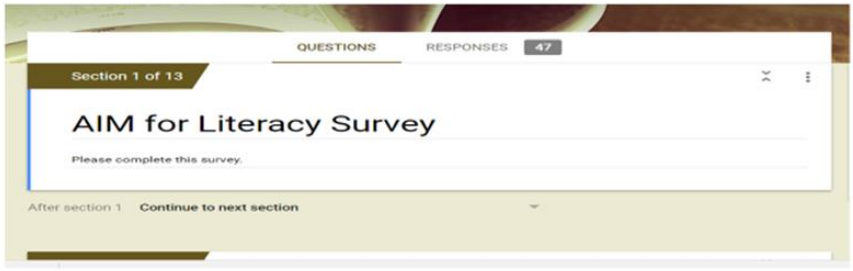
Analyzing Current Student Achievement Data Using Collaborative Inquiry Learning Cycle

- Activating and Engaging
- Exploring and Discovering
- Organizing and Integrating

Display your discussion when you are done.

Content Literacy Readiness Survey

- Create a Google account using your school email.
- Open up the google link in your email to complete the survey.



Day 2 Agenda

Time	Agenda Topics
08:30AM-10:00AM	Analyze Content Literacy Survey Data Using CI Process (90 minutes)
10:00AM-10:30AM	Learning to Read vs Reading to Learn (30 minutes)
10:30AM-10:45AM	Break (15 minutes)
10:45AM-12:00PM	Rationale for Content Literacy & Evidence Based Approaches (75 minutes)
12:00PM-1:00PM	Lunch (60 minutes)
1:00PM-1:30PM	Presentation of Approaches to Content Literacy (30 minutes)
1:30PM-2:00PM	Gallery Walk and Q & A (30 minutes)
2:00PM-2:15PM	Break (15 minutes)
2:15PM-3:15PM	Jigsaw the Contents in Content Literacy (60 minutes)
3:15PM-4:00PM	Presentation and Reflection of Learning (45 minutes)

Warm Up Activity

Dealt with a crisis situation with A gunman.

Parasailed in Hawaii

Won 3rd place for a national singing contest in college

Day 2 Objectives

- Participants will analyze the survey results using the collaborative inquiry process.
- Participants will compare the differences between "Learning to Read" and " Reading to Learn" based on the information in two articles and evaluate the current district practice for learning to read and reading to learn.
- Participants will describe the rationale for content literacy.
- Participants will describe the various approaches for developing the content literacy in students.
- Participants will understand what students need to look for as evidence in each content area.

Content Literacy Survey Result

- Activating and Engaging
- Exploring and Discovering
- Organizing and Integrating

Learning to Read VS Reading to Learn

Learning to Read	Reading to Learn

Why is Content Literacy Important?

Approaches for Developing Content Literacy

- The Cognitive Approach
- The Sociocultural Approach
- The Linguistic Approach
- The Critical Approach (Fang, 2012)

Theoretical Base	Research Tradition	Key Assumptions	Recommended Practices

What's the Contents Have to do with Content Literacy?

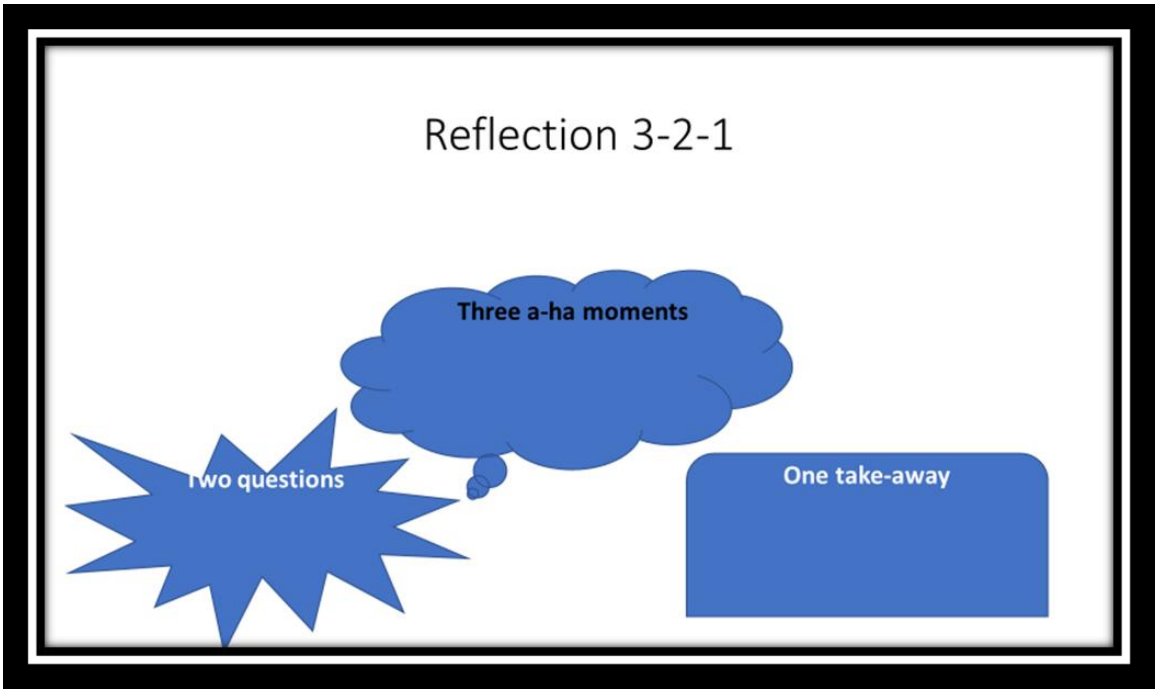
- "Disciplines are cultures of practices, and each has its own norms for how knowledge should be created, shared and evaluated" (Shanahan & Shanahan, 2014, p6363)
- "Literary critics, historians, and scientists have different standards for what counts as evidence, which our students need to recognize" (Stahl, 2014)

What Counts as Evidence?

- Literary Texts
- Historical Texts
- Scientific Texts
- Web sources/hypermedia

What did Research Say About the Text Evidence in Content Areas?

- Literature: Story/grammar elements, theme, author point of view, author's craft, universal human experience (Rosenblatt, 1978)
- Social Studies: Context (time, place written), source (author and media), corroboration of information by other sources (Wineberg, 1991)
- Science: Precise language, quality of data, corroboration of information by other studies, comprehensiveness of experimental sample, visual evidence (tables, charts, diagrams, models) (Duschl, & Osborne, 2002; Herrenkohl & Cornelius, 2013)
- Web Resources: Accuracy, author background, objectivity, recency, comprehensive coverage of topic (Beck, 1997; Coiro, 2013)



Day 3 Agenda

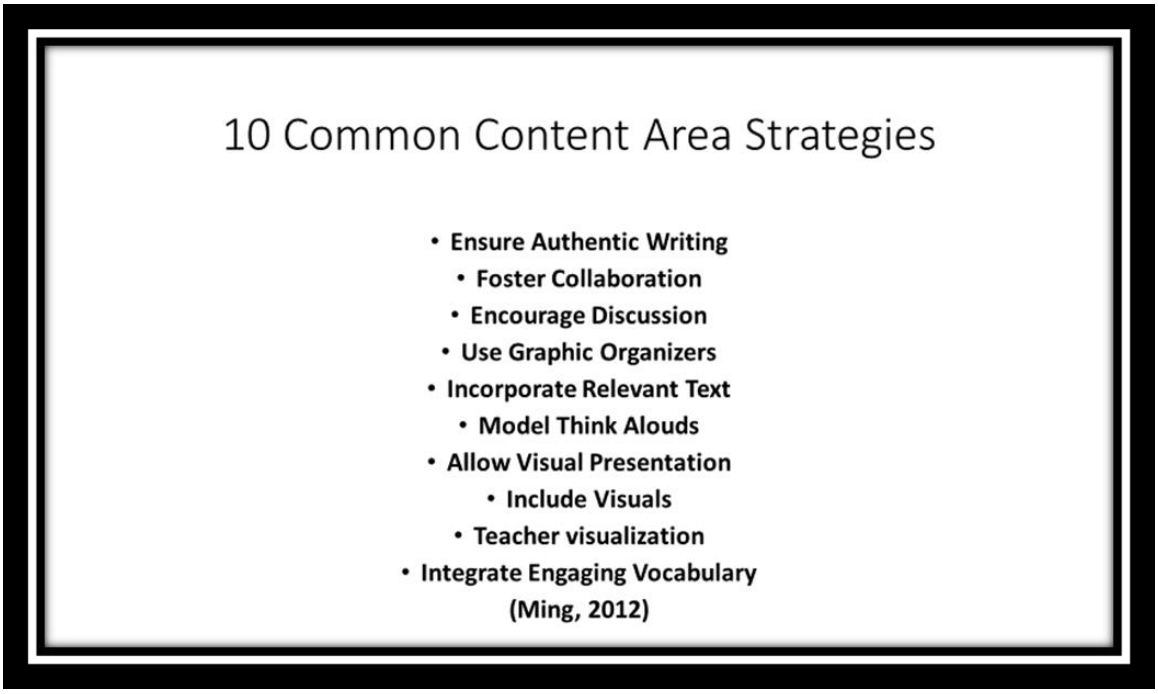
Time	Agenda Topics
8:30AM-9:30AM	10 Content-Area Literacy Strategies (60 minutes)
9:30AM-10:30AM	More Content-Area Literacy Strategies (60 minutes)
10:30AM-10:45AM	Break (15 minutes)
10:45AM-12:00PM	Putting it all together-How will content literacy look at myschool? (75 minutes)
12:00PM-1:00PM	Lunch (60 minutes)
1:00PM-1:30PM	Finalizing the School Content Literacy Plan (30 minutes)
1:30PM-2:00PM	Presentation of the School Content Literacy Plan (30 minutes)
2:00PM-2:15PM	PD Evaluation (15 minutes)

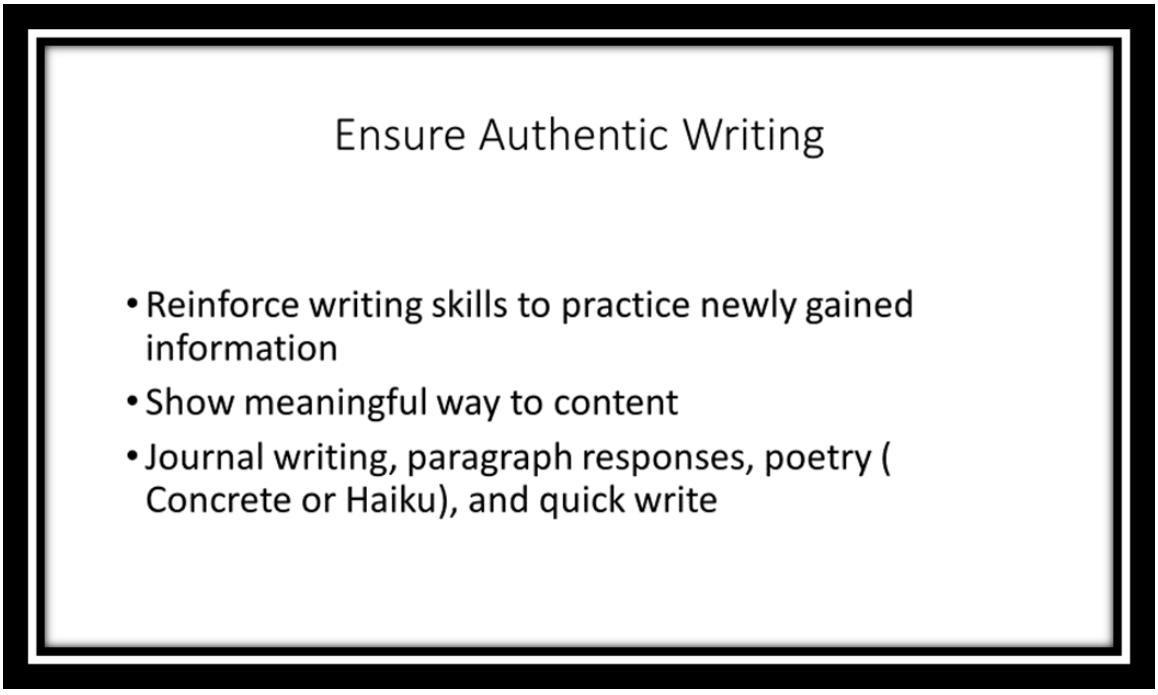
Warm Up

- At your table, share the reflection you wrote down at the end of yesterday.

Day 3 Objectives

- Participants will understand describe the 10 content area strategies.
- Participants will practice the chants in different content areas.
- Participants will explore different web resources tools for content literacy learning.
- Participants will outline the Content Literacy Action Plan for their schools.


10 Common Content Area Strategies
• Ensure Authentic Writing
• Foster Collaboration
• Encourage Discussion
• Use Graphic Organizers
• Incorporate Relevant Text
• Model Think Alouds
• Allow Visual Presentation
• Include Visuals
• Teacher visualization
• Integrate Engaging Vocabulary
(Ming, 2012)


Ensure Authentic Writing
• Reinforce writing skills to practice newly gained information
• Show meaningful way to content
• Journal writing, paragraph responses, poetry (Concrete or Haiku), and quick write

Examples Authentic Writing in Different Content Areas

- Art
- Mathematics
- Music
- Physical Education (Ming, 2012)

Foster Collaboration

- It provides opportunity for students to practice their listening, speaking, reading and writing skills
- Two collaborative options: Grouping retellings and jigsaw groups.

Encourage Discussion

- Ensure students are actively engaged in learning.
- Help stimulate student thinking.
- Teacher serves as facilitator instead of knowledge dispenser.
- Types:
  - Think-pair –share
  - Knowledge survey
  - Anticipation guide

Use Graphic Organizers

- Helps students to organize learned content in a visually appealing manner.
- Can be used before, during, or after teacher instruction.
- Commonly used graphic organizers: T-chart, Venn diagram, timline, K-W-L Chart, and enumeration chart.

Incorporate Relevant Text

- Relevant text enhances and reinforces students' content knowledge.
- Help students to clarify meaning and provide in-depth information.
- Example of relevant texts:
  - Fiction and nonfiction trade books (magazines, comics, etc.)
  - Reference resources (dictionaries, atlas, maps, etc.)
  - Newspaper articles

Model Think Alouds

- Teacher verbalizes the thought process to make the thinking explicit to students.
- Students could learn the way how a proficient learner process information.
- Think aloud tasks could include: making prediction, observing, and arguing.

Allow Visual Representation

- Students produce products of what they learned using multiple outputs.
- The outputs could be spoken, kinesthetic, written, or visual.
  - Spoken: panel discussion, role-play (reader's theater)
  - Kinesthetic: drama, experiments, or artistic endeavors.
  - Written: poems, stories, or letters.
  - Visual: construct a website, construct a graphic organizer, or draw a picture

Include Visuals

- Visual aids include pictures, diagrams, real-life objects, models, videos, maps, and body language.
- They help students organize, revise, and modify connections they make as they acquire content knowledge.

Teach Visualization

- Student need to get used to create metal picture of what they learned.
- Visualization improves comprehension skills .
- It engages students and focuses their attention.
- It helps students to make connection between prior knowledge with newly acquired ones.

Integrate Engaging Vocabulary

- Teacher must teach the content vocabulary explicitly by:
  - using visual aids to clarify the meaning of the words.
  - modeling for students using the vocabulary in context.
  - providing multiple opportunities for students to practice using the words.
  - teaching vocabulary that are essential and critical for students to understand the concepts.

More Content Literacy Strategies

- Chants and Cadences (Ciecierski & Bintz, 2012)
- Teacher controlled online learning through web resources (Casey, 2013)

Chants and Cadences

- It appeals to the pattern seeking human brain.
- A different way to learn content area materials through rhythm and songs.
- Practice students' listening skill, vocabulary, and humor.
- An alternative to recalling information from content.
- Students apply critical thinking skills when they create their own chants and cadences.
- It develops the writing skills of students.

Multi-Media Web Resources Social Media

- Create blog and classroom websites for students to interact informally outside of classroom, or to submit their assignment.
- Web applications for projects:
  - **mosaic**ally.com
  - www.toodoo.com
  - www.makebeliefscomix.com
  - www.tagxedo.com
  - Polldaddy.com
  - www.voki.com
  - bubbl.us

taggalaxy.de

www.befunky.com

Putting It All Together

- **Action Plan Goals for Literacy Development Across Content Areas**

Goal	timeline	Action Steps	Person(s) Responsible	Resources	Evidence of Success
Activate subject area/grade-level discussions content literacy strategies	School year				

Finalize the Plan

Goal	timeline	Action Steps	Person(s) Responsible	Resources	Evidence of Success
Activate subject area/grade-level discussions content literacy strategies	School year				

Share Out Your Plan

Appendix B: Handout-1

Summarized Findings in Relation to Research Question 1

Research Question		Interview			Walkthrough Observation	Lesson Plan Analysis
		Initial Attitudes	Attitude Now	Preferred TAP Elements		
	P1	Mixed	Positive	All		
	P2	Positive	Positive	All		
	P3	Positive	Positive	Multiple Career Paths, Accountability		
	P4	Negative	Positive	Ongoing Professional Growth, Accountability		
RQ 1					NA	NA
	P5	Positive	Positive	TAP Rubric		
	P6	Positive	Stressful	Ongoing professional growth, Accountability		
	P7	Resistant	Mixed	Cluster Meeting		
	P8	Positive	Positive	All		
	P9	Positive	Positive	All		

Summarized Findings in Relation to Research Question 2

Research Question	Interview	Walkthrough Observation	Lesson Plan Analysis
RQ 2	-Teachers' most rewarding experiences: on-going professional growth, student academic growth, collaboration, changes of instructional strategies, TAP instructional rubric, cluster group meeting, multiple career paths, walkthrough, AC & mentor teachers support -Teachers' most challenging experiences: Paperwork burden, resistant teachers, unable to make cluster-classroom connection, interrater reliability, getting out of comfort zone, instructional rubric -Preparation to make the implementation lesson challenging: continue the AC and mentor teacher support for teachers, extended new teacher orientation, review TAP rubric yearly, strengthen interrater reliability, differentiate the cluster based on content, slow down the change process.	NA	NA

Summarized Findings in Relation to Research Question 3

Research Question	Interview	Walkthrough Observation	Lesson Plan Analysis
RQ 3	Reported changes in instructional strategies: -Standards and Objectives (TAP Rubric effective teaching strategy) -Activities and Materials (TAP Rubric effective teaching strategy) Use of technology Use of activities that are relatable and personally meaningful to students and meet the needs of students -Presenting Instructional Content (TAP Rubric effective teaching strategy) Modeling Use of visuals -Grouping students (TAP Rubric effective teaching strategy) -Questioning (TAP Rubric effective teaching strategy) -Academic feedback (TAP Rubric effective teaching strategy) -Student engagement strategies -ELL Methodologies -Use of data	Observed strategies in the classroom: -posted learning objectives which aligned with the standards -Teacher referred to learning objective at the beginning and throughout the lessons. -Students use differentiated reading program (Acieve3000) on the computer individually. -Note taking strategies(Cornell and interactive note taking -Use of manipulative, hands-on materials and kinesthetic activities -Real-life application -Teacher's modeling of the use of reading strategy and graphic organizer during guided reading -use of anchor chart for learning -use of PowerPoint presentation by the teacher to show certain concepts -Teacher used think-pair-share to increase the opportunity for student-to-student interaction -Small group discussion -proper wait time, high frequency of questions to check for student understanding -Teacher gave specific oral feedback to students based on their class assignment. -Teacher used feedback from the students to adjust their instruction during the lesson. -Students used Total Physical Response(TPR) to answer the teacher's questions. -Students worked together on group project. -Students worked on center activities. -Syntax surgery activity -50/50 teacher/student talk -Students answered teachers' questions with complete sentences -Teacher used data to monitor student progress on Achieve 3000.	Documented aligned learning objectives to the district curriculum and state standards from P1, P2, P3, P5, P7, & P8 Documented observed learning materials and activities which were aligned with the learning objectives from P1, P2, P3, P5, P7, & P8

Summarized Findings in Relation to Research Question 4

Research Question	Interview	Walkthrough Observation	Lesson Plan Analysis
RQ4	-Only one participant reported the school leadership team made a cultural connection to the TAP implementation. -One participants mentioned she identified the connection between the native culture and the TAP implementation but did not share the idea with anyone at her school site. -One participant reported that she observed the loss of the native language among younger generation. Two other participants mentioned the loss of native traditional practices. -One participant mentioned the native taboos limited the learning materials for her lesson. -The rest of the participants did not see any connection between the native culture and the TAP implementation.	-One participant made the cultural reference to the four directions of the learning targets for her learners (learning objectives) in the classroom (Participant 3).	Documented cultural relevant four direction of the learning targets from Participant 3.

Appendix C: Handout 2

Defining, Developing and Sustaining High-Performing Cultures

Significant and stable changes in student performance required not only changes in classroom practices but also changes in the working culture of teachers. All cultural change requires leaders to recognize patterns and determine which patterns of interaction are productive and which patterns are not. All groups, both large and small, develop norms around the distribution and use of influence, authority, and power (Schein, 2004). How these norms playout in a given group forms the baseline from which any changes will emerge. Developing and sustaining high-performing cultures is an ongoing learning process that requires pattern breaking of unproductive patterns and conscious patter making of robust and constructive ways of working together.

Organizational cultures reflect written and un-written rules that are based on underlying assumptions and values. These values are expressed in actions and artifacts: in the languages, symbols, ceremonies, rituals, and reward systems; in approaches to problem solving; and in the design of the work environment (Deal & Peterson, 1999, Schein, 2004).

Within an organization, various subsets including grade-level teams, departments, and data teams also embody and express unique group personalities based on collective values and assumptions. Cultural influences four key drivers of a group's work: (1) focus, or what captures the group's attention; (2) commitment, or the degree to which individuals identify with the group; (3) motivation, or the willingness to invest time and energy within meetings and outside of them; and (4) productivity, or the degree of goal achievement (Deal & Peterson, 1999). These cultural elements both inform and direct the ways in which a group sees itself, treats its members, and engages with its tasks. Ingrained behavioral patterns result from deep, unconscious drivers. When these invisible elements are brought to the surface and made visible, groups can shape and strengthen both their processes and their results.

Describing the Seven qualities of High-Performing Groups

A work culture is not static. Culture is both a noun and a verb, and is shaped by the continued shared experiences of the group and the processing of these experiences. The resulting adjustments in behaviors influence the beliefs and assumption that ultimately become the new operating norms.

In schools, the quality of the adult culture directly affects the learning environment for students. The presence of a professional community that is centered pm student learning makes a significant difference to measurable student achievement (Bolam, McHahon, Stoll, Thomas, & Wallace, 2005; Louise & Marks, 1998).

The power of connection compels us to examine and define the interactions between adults that produce the most positive results for learners and learning. That is, what makes a group culture powerful, and what can we do to make it even more so?

The following seven actions describe high-performing groups.

1. Maintain a clear focus.

2. Embrace a spirit of inquiry.
3. Put data at the center.
4. Honor commitments to learners and learning.
5. Cultivate relational trust.
6. Seek equity.
7. Assume collective responsibility.

These qualities are lenses through which groups and individual group members can view their interactions to gain perspective on the choices that they are making and the skills they are applying as they work together.

Group development also requires personal development. When and how group members choose to participate emerges from individual and collective awareness and commitment to developing these attributes.

Main a Clear Focus

High-performing groups clarify desired results and define success criteria. Less-productive groups meander from topic, often within over overcrowded agenda. Such group use a scattershot approach in which all items are treated with equal importance. High-performing groups agree on and protect priorities for themselves and their students, preserving precious time for focused engagement about the things that matter.

By establishing clear and measurable goals and using success criteria to determine progress, these group can work in the present while holding longer-term vision for improvement (Jaques & Cason, 1994). These groups are willing to sustain focus for extended period of time. For example, achieving high levels of reading comprehension for all students required significant attention and innovation in instructional and assessment practices. The results for these changes for large cohorts of students may not appear in the short term, but they will increase over time with ongoing monitoring and adjustments informed by data-driven conversations.

High-performing groups manage and minimize the constant distractions. Agreed-on structures and signals supply digression management, particularly when time is short, energy is low, and tasks are demanding. For example, such group have prioritized and time-coded public agendas to guide time monitoring and shorthand language, such as birdwalk alert, when the conversation wanders away from the topic at hand.

In these groups, member self-monitor, paying attention to themselves and each other, to gauge whether their contributions add to or detract from the group's focus. There is an agreement that maintaining focus is more important than any individual's desire to share an anecdote or elaboration.

Embrace a Spirit of Inquiry

High-performing groups ask genuine questions (Schwarz, 2002) about their own processes and practices, as well as their students' learning. They inquire. By definition, inquiry means you do not have a preferred response or do not already know the answer.

As Goldberg (1998) states, “Because questions are intrinsically related to action, they spark and direct attention, perception, energy, and effort, and so are at the heart of the evolving forms that our lives assume” (p.3). Less-productive groups avoid ambiguity, uncertainty, and challenging questions, wrapping themselves in and drawing on the comfort of their existing knowledge base.

High-performing groups are both problem seekers and problem solvers. These groups seek external resources and data outside their own experiences. Such groups consider an and/both approach, not right/wrong or either/or responses, skillfully engaging in conflict with ideas, not with one another. They inquire into data to explore who is learning and who is not, seeking patterns and root causes before pursuing solutions and planning actions.

In these groups, members are willing to suspend their own judgements and opinions as they consider other perspectives. They are willing to delay solution generation. They push past surface ideas and avoid the comfort of quick conclusions, seeking external resources to extend their own knowledge base.

Put Data at the Center

High-performing groups use data to inform and guide group and student learning. These data focus and calibrate conversation. Less-productive groups blur fact and opinion, occupying time with anecdote and argument. High-performing groups tap multiple types and multiple sources of data to move their work forward. For example, a group might examine student work products, standardized test scores, and classroom-based assessment to reveal a fuller picture of student performance in a specific skill area.

By exploring both formative and summative sources and using shared protocols and structures, these groups are able to depersonalize the data and use them as a catalyst for rich conversations about practice, learning, and progress toward desired goals. With skillful inquiry and balanced participation they delve beneath the surface features of the data, preserving in the quest for deeper understanding.

In these groups, members are assessment literate. They keep data central to the conversation seeking out and using multiple sources and multiple types to inform their choices and plans. They make sure the data are available to, visible to, and understood by everyone.

Honor Commitment to Learners and Learning

High-performing groups keep learning as the focus of their conversations. The see themselves and all members as learners, and they are willing to consider the limits of their own knowledge. This essential disposition energizes the learning potential within the group and extends to high-powered learning for students. Less-productive groups stay within the boundaries of their current capabilities and are satisfied with merely meeting expectations, not exceeding them, both for themselves and for their students.

High-performing groups keep their focus on what is good for students, not just convenient for themselves. They explore the process, performances, and products of

learning. They also assess and monitoring their own learning, reflecting on their processes and products and setting goals for continuous improvement.

In these groups, members explore learning for all students, not just select groups. They seek to improve learning for the high-performers, as well as those who may be struggling. As committed learners themselves, they understand that their students' growth links to their own.

Cultivate Relational Trust

High-performing groups operate with high expectations and positive intentions as central assumptions. Within these groups, it is safe to display both high competence and vulnerability. In less-productive groups, members fear attack or reprisal for things they might do or say, and they are filled with doubt, having little or no faith that their colleagues will honor decisions or follow through on agreements. High-performing groups rely on the integrity and competence of their colleagues inside and outside of the meeting room. When it is safe not to know, teachers seek the counsel of their peers; they can count on follow groups members' reliable and consistent application of team agreements to their own professional practice.

In these groups, members say what they'll do and do what they said. They assume positive intentionality and believe in the goodwill of their colleagues. They understand the difference between a question and a critique. For this reason, they are willing to be vulnerable and disclose both their successes and shortcomings, knowing that this information will not be exploited or belittle. They hold high expectations for themselves and each other and have faith that those expectations will be met and even exceeded.

Seek Equity

High-performing groups leave titles, seniorities, and role authority at the door. On this level playing field, they seek a diverse blend of voices and protect space for all to contribute. Less-productive groups limit participation and restrict divergent thought, sealing themselves in the protection of their own logic. They congratulate themselves for small successes and rationalize performance gaps.

High-performing groups ensure reciprocity, foster interdependence, and engage in productive collaboration. They apply structures to ensure that the data shy and data literate have equal voice in their conversation as all strive for shared understanding. For example, such groups provide equal opportunities to join the conversations by creating smaller task groups that focus on large, shared data displays; using round-robin protocols to balance participation; and publicly charting so ideas belong to everyone.

Assume Collective Responsibility

High-performing groups make and honor agreements about who they want to be as a group and what they want to produce for their students. They make data-driven choices and are willing to be answerable for those choices. This collective efficacy, or the shared belief that together the group will successfully achieve its goals, is a prime resource for

sustained improvements in student learning (Goddard, Hoy, & Woolfolk Hoy, 2004) In less-productive groups, members are protective of their autonomy in the meeting room and in the classroom. They are unwilling to see others' work as part of their own. They don't believe that team members have the capacity and willingness to make a difference.

Groups with high degrees of shared responsibility pursue challenging goals, exert concentrated effort, and persist in collective action leading to improved performance for the group and their students (Goddard, Hoy, &Woolfolk Hoy, 2000). In these groups, members believe in the power of the group to make a difference for students. They recognize that their individual choices, both in the meeting room and in their classrooms, affect everyone. Thus, they willingly invest their time and energy, setting aside personal agendas to support the group's work and its development.

Lipton, L., & Wellman, B. (2012). *Got data? Now what? Creating and leading cultures of inquiry.* Bloomington, IN: Solution Tree Press. (Use with permission from Solution Tree)

Appendix D: Handout 3

The Cognitive Approach

The cognitive approach derives its theoretical support from cognitive psychology, a branch of psychology that studies how people perceive, understand, think, reason, remember, and learn. It advocates systematic, explicit teaching of mental routines or procedures for accomplishing cognitive goals, such as understanding a text, writing an essay, or solving a problem. These routines or procedures are referred to, broadly, as cognitive strategies (Dole, Nokes, & Drits, 2008). They include strategies commonly used in content area reading/writing, such as predicting, inferencing, monitoring, summarizing, concept mapping, and note taking. The approach assumes that the cognitive requirements for reading/writing are essentially the same regardless of content areas. It promotes the use of generic cognitive strategies before, during, and after reading/writing to help students comprehend and compose texts across all content areas.

Prominent since the 1970, the cognitive approach has been operationalized or packaged in many ways for instructional purposes (see Table for examples). These programs show that the cognitive strategy instruction improves student reading, writing and learning and that teaching a combination of strategy is more effective than teaching individual strategies in isolation from one another and from content (for reviews, see Dole, Nokes, & Drits, 2008; and Gerstern, Fuchs, Williams & Baker, 2001). Using the evidence standards established by the What Works Clearinghouse, Kamil et al.(2008) concluded that the evidence base for cognitive strategy instruction is "strong".

Despite the solid evidence base, there are still questions regarding the nature and workings of cognitive strategies. Conely (2008) spotlighted a lack of understanding about how cognitive strategies can be meaningfully integrated into our overall efforts to improve adolescents' content learning. Catts (2009) questioned whether cognitive strategies are indeed comprehension strategies. To him, cognitive strategies such as summarizing are the product, rather than the cause, of comprehension, because providing a summary of a passage is possible only when the reader has comprehended the passage. He noted that it is possible that cognitive strategies "are not essential skills necessary for reading comprehension but rather activities that focus readers' attention on what is important in comprehension" (p. 180).

Hirsh (2005) argued against an overemphasis on cognitive strategies in literacy instruction, suggesting that few school-aged children have trouble using them in daily listening comprehension. He recommended that instructional efforts by channeled instead of building students' knowledge of "words and the world". Clearly, there are serious doubts regarding whether implementing cognitive strategy instruction for adolescents would in fact, as Conley (2008) has claimed, "pay big dividends in learning" (p.103).

The Sociocultural Approach

The sociocultural approach recognizes that literacy is a complex process involving not just a cognitive dimension but social and cultural dimensions as well. The extent to which readers/writers are able to construct meaning with texts is influenced not only by background knowledge and strategy use but also such factors as purpose, interest, motivation**,** and identify. This new understanding of literacy led scholars to call for a reconceptualization of what it means to be literate and what can be done to promote academic literacy in the context of secondary schooling (Bean, 2000; Elkins & Luke, 1999). A common thread in this line of scholarship is that teachers should value out-of-school literacies that adolescents bring to the classroom and use their everyday funds of knowledge and cultural practices as both a bridge to and a resource for promoting the development of content area literacies.

Adolescent literacy projects that draw on the sociocultural approach not only sought to build connections between home/community and school but also explored ways to meaningfully and strategically integrate the multiple funds of knowledge and literacy practices that students bring to school with the academic practices of disciplinary learning in content area classrooms. They reported positive impact on adolescents' motivation, engagement, and learning (see Hull, 2012 for a brief review). However, because research involving these projects is primarily qualitative, the evidence base for the sociocultural approach is considered "moderate" at best by the What Works Clearinghouse standards (Kamil et al., 2008).

In its efforts to leverage students' knowledge, language, and literacy practices for academic learning, the sociocultural approach demystifies academic language and academic literacy, blurring the distinction between the academic and the everyday. In doing so, however, it also tends to downplay real and significant differences between academic language and everyday language that research (e.g., Fang, 2012; Scheppergrell, 2004) has shown to exist and be a major cause of reading and learning difficulties for many adolescents. According to Halliday (2004), for example, "the discourses of science gain their theoretical power precisely because they are not translatable into commonses terms….There is bound to be a certain disjunction between the grammar of scientific writing and the commonsense grammar of daily life" (p. 49).

Failure to take serious account of such differences makes language "hidden curriculum" of schooling further hindering the learning of disciplinary knowledge and ways of using language, a key goal of content area learning. Another concern with the soiciocultural approach is that it requires reconceptualization of existing school structure s as integral to, rather than separate from, students' home and community, a feat that may be challenging, albeit not impossible, to accomplish in the current sociopolitical climate.

The Linguistic Approach

The linguistic approach believes that students must master the lexical and grammatical resources of language that construct the knowledge and value of content areas to be successful in school, college, and workplace (Schleppegrell, 2004). It recognizes that the texts students read and write in early grades lack the richness, depth, and complexities found in the texts that present the more specialized, abstract, and advanced knowledge in later years of schooling (Fillmore & Fillmore, 2012).

Traditional foci of the linguistic approach have been on decoding, fluency, vocabulary, and text structure. However, there have been calls for greater attention to other grammatical elements in literacy instruction. For example, Scott (2004, 2009) noted that the syntactic properties of sentences can make a text difficult to understand. She recommended using strategies such as paraphrasing a difficult sentence periodically while reading, having students generate questions after reading a complex sentence, manipulating the structure and meaning of short sentences, and teaching students to write more complex sentences as ways to help students cope with syntactic complexity.

Fillmore and Fillmore (2012) proposed a short daily instructional session in which teachers engage students in analyzing the structure of a "juicy" sentence from a content area text under study and discussing the information presented in these structural elements. The focal sentence is usually grammatically complex but interesting and conveys an important point in the text. Greene (1996) reported on an individualized, structured language curriculum that teaches the structure and use of all language systems (e.g., phonology, orthography, morphology, semantics, syntax) to poor adolescent readers. Fang and Schleppegrell (2008, 2010) described a more functional model that provides teachers with a set of practical tools for engaging students in systematically analyzing the language patterns and discussing the meanings of these patterns in a segment of text that is challenging but important for developing disciplinary understanding. These tools enable students to learn about how language is used as a creative resource for constructing different sorts of knowledge and value in various disciplines at the same time they are learning disciplinary content and developing disciplinary habits of mind through language.

The evidence base for the linguistic approach is mixed. Kamil et al. (2008) determined the level of evidence to be "strong" for explicit vocabulary instruction. There is also some, albeit inconsistent, evidence that teaching sentence complexity, text structure, and grammar analysis can improve reading and writing (Graham & Perin, 2007; Locke, 2010; Scott, 2004). A key issue in the implementation of the linguistic approach is to make sure that language is not taught as isolated drill-like exercises devoid of functionalities and content contexts. Another concern is that many teachers lack deep knowledge about language to make the linguistic expectations of content area learning explicit to students (Schleppegrell, 2004). A lack of linguistic know-how can prevent teachers from effectively developing the language resources students need for full participation in content area learning and disciplinary socialization.

The Critical Approach

The critical, or sociopolitical, approach views all texts— written, spoken, linguistic, visual, and multimedia—as inherently ideological and value laden, suggesting that text meaning is neither natural nor neutral and must therefore be understood in relation to both the intention of the writer/designer and the social historic-political contexts that govern its production. From this perspective, then, content area texts are both "positioned and positioning" (Janks, 2005, p. 97): They are positioned by the author's values and viewpoints, and the verbal and other semiotic choices made by the author create effects that position the reader in particular ways. The approach foregrounds the situated, constructed, and contested nature of meaning; emphasizes the development of critical consciousness about texts and language use; and promotes thoughtful critique and eventual disruption of existing social relations and hegemonic power structures (Cervetti, Pardales, & Damico, 2001). As such, it has a strong social justice agenda that goes beyond the government and business sanctioned goals of college/career readiness and workplace productivity.

The critical approach has gained growing recognition in literacy education since the 1990s as critical consumption of texts becomes even more important in an era of information explosion and technological revolution. The approach engages students in analyzing texts and interrogating the values, prejudices, and ideologies underpinning these texts, helping them better understand the politics of representation and the constructedness of knowledge. It encourages teachers and students to collaboratively explore such questions as the following: Who is and is not represented in the text, and why? Whose interest is best served by the message of the text? How are various people positioned by the text? How do particular content, discourse genres, and modes of inquiry become privileged and acquire power in particular disciplines? And how does such privileging affect access, equity, and learning in the classroom?

Classroom practices that promote such a critical orientation to texts include (a) reading supplementary texts that cover social issues glossed over or avoided by traditional or canonical texts, (b) reading multiple texts on the same topic to gain insights into author subjectivities, (c) reading the same text from a different perspective based on gender, race, ethnicity, sexuality, religion, or political affiliation, (d) producing texts that counter the perspective of the author, and (e) taking social action aimed at making a difference in students' or others' lives (Behrman, 2006).

In essence, the critical approach aims to empower students to read both "the word and the world" (Freire & Macedo, 1987) through analyzing, evaluating, problematizing, and transforming texts. However, this agenda appears to be undermined by increased standardized testing and government intrusion in classroom instruction. Without a canon of texts or formulaic teaching procedures, the approach does not lend itself to standardization or commercial prepackaging. The result is that ways of doing critical

literacies can look rather different from one classroom to another (Luke, 2000). In part because of this problem, the evidence base for the approach is considered "low" per the What Works Clearinghouse standards (Kamil et al., 2008). A further challenge in implementing the approach is that it requires both teachers and students to develop an understanding of how lexical and grammatical choices realize meaning in text. Absent this knowledge, it is not possible to conduct text analysis and see how texts mean what they mean; and without text analysis, it is not possible to do critical literacies (Janks, 2005).

Fang, Z. (2012). Approaches to developing content area literacies: A synthesis and a critique. *Journal of Adolescent & Adult Literacy, 56*(2), 104-106. doi:10.1002/JAAL.00110. (Use with author's permission)

Appendix E: Handout 4

Ensure Authentic Writing

Writing is the process by which students compose text in a coherent fashion; it provides them with opportunities to demonstrate their desire to learn specific content, reinforce newly gained information, or show their acquisition of knowledge. When students write for authentic purposes, they respond in meaningful ways to content. Writing can take many forms, and students can write journal and paragraph responses, poetry, and quick writes (Behrman 2004; Buell and Whittaker 2001; Pearman and Friedman 2009). Journal and paragraph writing are written responses to content learning. Students writes about information they have read, listened to, discussed, and observed. They can write in a response journal to share their thoughts about text along with emotional reactions toward it, and they can write in learning logs or use paragraph responses to keep track of their learning.

A concrete poem is a poem that forms a picture of the topic or follows the contours of a shape that is suggested by the topic. Haiku poems are a type of poetry from Japanese culture, and they conclude topics about nature. The first line usually contains five syllables, the second line contains seven syllables, and the third line contains five syllables. Student can write concrete poems that form the picture of the topic they are learning about, or they can write Haiku poems that while short in nature, provide a concrete image of the topic. Quick writes allow students to respond, in 2-10 minutes to an open-ended question or prompt posed by the teachers. Students can also engage in quick writes that give them the opportunity to reflect on a topic and freely write about it (Ness 2007; Whitin and Piwko 2008). For example, after learning about the order of operations in arithmetic, a teacher could ask the following question: Do you feel like you have mastered the steps in using the order of operations to solve arithmetic problems?

Examples of How to Integrate Authentic Writing into Different Content Areas

	Ensure Authentic Writing
Art	• Write journal entries to respond to artists who are read about. • Write poetry to respond to images that are viewed.
Mathematics	• Write paragraphs to explain procedures or solutions to a problem.
Music	• Write poetry to describe a concept. • Write notes, descriptions of strategies, and vocabulary in an academic notebook.
Physical Education	• Write poetry about musical instruments that are enjoyed. • Write a “quick write” to explain one rule of a game to be played and why it is important to follow the rule. • Write in a journal to record performance and get a goal for the next class session.

Foster Collaboration

Collaboration occurs when students work together to achieve a goal. Teachers must ensure that students are deliberately placed in collaborative groups. Two collaborative grouping options are group retellings and jigsaw groups. The procedures for participating in group retellings are as follows: (1) Students of differing abilities work in groups of three or more; (2) each member reads a different text on the same topic; (3) after reading, each member shares what he or she has read while other members listen and at any of their own reading. The procedures for for participating in jigsaw groups are as follows: (1) The teacher provides a main topic for students to exp[lore; (2) She places three to six members in a team, giving each member a subtopic of the larger topic; (3) students become experts in their subtopic; (4) jigsaw members temporarily leave their groups to join an "expert group" (all of whom have studied the same subtopic) to discuss and share ideas; (5) experts return to jigsaw teams to teach their subtopic to the other group members; (6) jigsaw members listen and take notes.

When students are deliberately placed into groups, the teacher accounts for students' ability levels, their personal characteristics, and the task that is expected of them as they work with group members. Students can participate also need to know what role they will play in these group settings. Roles can include reader, note taker, and discussion leader. Students can participate in group retellings in which they read a different text on the same topic and share with two to five group members, or they can contribute to jigsaw groups that require them to become experts on a subtopic of a larger topic and teach it to two to five group members (Box and Little, 2003; Vacca, Vacca, and Mraz 2011).

Examples of How to Integrate Collaboration into Different Content Areas

	Foster Collaboration
Art Mathematics Music Physical Education	• Use group retelling to read a different text about the same artist, and then form groups to share the perspective of the text. • Use jigsaw groups to learn an assigned step of a procedure needed to solve a problem, and then explain the designated step to group mates • Use group retelling to read a different text about the same musician, and then from groups to share the perspective of the text. • Use jigsaw groups to learn an assigned step involved in playing a game or sport, and then explain the designated step to their group mates.

Encourage Discussion

In classroom discussions, students and teachers exchange ideas on a given topic. This ensures that students are actively engaged in learning, and teachers serve as facilitators instead of dispensers of knowledge. Teachers can use the *think-pair-share* strategy to encourage discussion by asking students to think about a concept, exchange their ideas with tablemates or group mates, and then share with the class at large. They can also have students complete knowledge surveys and anticipation guides prior to the introduction of a new topic. A knowledge survey is an analysis sheet with a list of terms or concepts that students must evaluate to determine their familiarity with the ideas. For example, the teacher could list the following instruments for students to define prior to teaching a lesson about woodwind instruments: flute, piccolo, oboe, clarinet, saxophone, and bassoon. An anticipation guide is a series of thought-provoking statements to which students must respond prior to reading text. An example of a thought-provoking statement that students could respond to in a physical education class could be: Healthy eating is not necessary if I exercise and play sports every day. When students have had the opportunity to interact with and think about content prior to formal instruction, it helps to stimulate thinking. The teacher subsequently uses the information gathered
as a springboard for classroom discussion (Lee and Spratley 2010; Millman 2009; Morse 2008; Spencer and Guillaume 2009; Yell, Scheurman, and Reynolds 2004).

Examples of How to Integrate Discussion into Different Content Areas

	Encourage Discussion
Art	• View a photograph or painting, think (T) about what ideas it raises, pair (P) with a partner, and share (S) ideas (think-pair-share).
Mathematics	• Respond by stating “yes” or “no” to a knowledge-rating survey about whether there is familiarity with specific concepts and/or
Music	terms.
	• Listen to a genre of music, think (T) about how colorful it sounds as it pertains to the vibrancy, tone, and rhythm of the notes being
Physical Education	• played; pair (P) with a partner, and share (S) ideas (think-pair-share).
	• Use an anticipation guide to indicate agreement or disagreement to a series of
	• thought-provoking statements. Responses are used as a springboard for classroom discussion.

Use Graphic Organizers

A graphic organizer is an instructional device that allows knowledge or ideas to be organized in a visual way. It is used before, during, and after instruction by students and teachers to demonstrate meaningful connections across concepts. Numerous graphic organizers exist, and a few include the t-chart, Venn diagram, timeline, K-W-L chart, and enumeration chart. Table 5 provides specific details for the ways in which these graphic organizers can be used. With the t-chart and Venn diagram, students and teachers examine and represent two aspects of a topic using a t-shaped graphic or interlocking circles. With a timeline and an enumeration chart, students keep track of patterns such as historical sequences, lifecycles, story elements, and steps in a process using a vertical or horizontal list sequence. The three-column K-W-L chart allows students to monitor their learning by having them note what they know (K) about a topic in the first column, what they want (W) to learn in the second column, and what they have learned (L) once instruction takes place in the third column (Gallavan and Kottler 2007; Greenwood 2002; Monroe and Orme 2002).

Examples of How to Integrate Graphic Organizers into Different Content Areas

	Use Graphic Organizers
Art	• Use a t-chart to compare and contrast visual elements. • Use a timeline chart to sequence the events in an artist's life.
Mathematics	• Use a K-W-L chart to track knowledge of vocabulary.
Music	• Use an enumeration chart to show the steps in solving a problem. • Use a t-chart to compare and contrast a description of the sounds of different instruments.
Physical Education	• Use a K-W-L chart to track knowledge of vocabulary. • Use a Venn diagram to compare and contrast different sports. • Use an enumeration chart to show the steps or processes in a game.

Incorporate Relevant Text

Relevant text refers to supplemental reading materials that serve to enhance and reinforce students' content knowledge. These materials help to clarify meaning, provide in-depth information, ensure simpler vocabulary, and offer greater student engagement. While textbooks
are the primary medium through which students learn content, there are challenges that they face in using these materials. Students struggle to read textbooks because they are sometimes written above their reading levels with challenging vocabulary, topics are covered at a surface level, and the organizational style of writing is unfamiliar to them (Ballinger and Deeney 2006; Jenkins
2010; Wallace, Clark, and Cherry 2006). Thus, supplemental reading materials can include fiction and nonfiction trade books (i.e., any books that are not textbooks, magazines, comics, and reference books), reference resources (e.g. dictionaries, atlases, maps), and reading
materials that are used in one's everyday life (e.g., newspapers, magazines) (Johnson and Giorgis 2001). Table 6 shows the kinds of reading that can be supported with the use of supplemental text.

Examples of How to Integrate Relevant Text into Different Content Areas

	Incorporate Relevant Text
Art	• Read biographies about famous artists. • Read picture books that demonstrate the visual arts and nonfiction literature about the history of art education, medieval art, photography, and sculpting. • Read fictional literature in which mathematics concepts are integral to the story development.
Mathematics	• Read weekly department store sale flyers, sale coupons, the sports section of the newspaper, and other nonfiction literature about how mathematics is relevant to our daily lives.
Music	• Read biographies about famous musicians and nonfiction literature about the history of musical genres. • Read song lyrics.
Physical Education	• Read the sports section of the newspaper and sports magazine articles. • Read game rules, lists, charts, graphs, and playbook manuals.

Model Think Alouds

Think alouds occur when teachers make their thought processes explicit to students. As teachers read, model, and engage in instructional activities, they verbalize exactly what is going on in their minds. This practice helps students understand what proficient learners should think about as they actively seek information (Block and Israel 2004).

Teachers can engage in several forms of think alouds, some of which include making predictions, observing, and arguing. When teachers make predictions they use contextual information to make decisions about what they believe the text will be about. For example, the teacher could verbalize the following once she has previewed a piece of physical education text: "Based on the title of the reading, the headings and subheadings, and the pictures, I believe that this text will be about how anaerobic activity can strengthen the heart."When teachers observe, they comment on textual information or environmental situations. For example, as the teacher reads an art text aloud, she could stop and verbalize the following: "Based on this artist's extensive use of white space, I believe that he wants my focus to be on the image in the center of the page." When teachers argue, they use textual information to take a stance on a specific point. For example, in modeling how to solve a mathematics problem, the teacher could say: "While there are multiple ways to arrive at the answer, the way that I am showing you is absolutely the easiest way to solve the problem."

Examples of How to Integrate Modeling Think Alouds into Different Content Areas

	Model Think Alouds
Art	• Verbalize images that come to mind upon seeing an abstract piece. Emphasize how the artist's use of line, color, shape, and/or texture gives the piece its look and feel.
Mathematics	• Verbalize each step for solving a word problem. When solving algebraic problems, for example, emphasize the importance of maintaining balance, which means that what is done on one side of the equation must be done on the other side as well.
Music	• Verbalize the challenges of playing a specific instrument. Stress the significance of accurately reading the notes on the lines and in the spaces to maintain the appropriate rhythm of the piece.
Physical Education	• Verbalize each step of a practice drill while performing it. Demonstrate correct body formation or body shape while engaging in the activity.

Allow Visual Representation

Visual representation occurs when students create meaning by using multiple outputs. They create meaning to show the depth of knowledge that they have gained. Outputs can be spoken, kinesthetic, written, or visual. When students create spoken outputs they can participate in a panel discussion, role-play based on text characters, or take part in a reader's theater play. When students create kinesthetic outputs they can be involved in drama, experiments, or artistic endeavors. When students create written outputs they can write poetry, stories, or letters. When students create visual outputs they can construct a website, construct a graphic organizer, or draw a picture (Burke 2000; Bustle 2004; Chapman, Greenfield, and Rinaldi 2010; Kenney 2009; Soundy and Drucker 2010). The table demonstrates the use of visual representation in each of the four content areas.

Examples of How to Integrate Visual Representation into Different Content Areas

	Allow Visual Representation
Art	• Tell a story by using only pictures or drawings.
Mathematics	• Read a text and draw a picture to illustrate perception or interpretation. • Use line, color, shape, and/or texture to help illustrate the reaction. • Use manipulatives to represent a problem. Ensure that the manipulatives show the cohesiveness or unity across all parts of the problem. • Draw a picture or make a diagram to show how the problem parts are related.
Music	• Interpret music through dance. The dance should have clean lines and should maintain precise • rhythm.
Physical education	• Draw a picture to describe the feelings that music brings forth. • Create a brochure that highlights the school's athletic programs. Emphasize the variety of games that are played across the student body. • Design a playbook that describes and illustrates strategies to be used during a game.

Include Visuals

Visuals refer to physical aids that teachers use in their instruction to make sure that it is explicit and effective. The majority of students are visual learners (Heynen 2008; Sipe 2001); thus, this method will help them make associations from existing to new concepts. If students are unable to make the appropriate connections, learning will not be meaningful. Visuals provide the missing link because they help students organize, revise, and modify the connections they make as they acquire content (Alsop and Bergart 2007; Mitchell and Hutchinson 2009; Tompkins 2009). Visuals include pictures, diagrams, real-life objects, models, videos, maps, and body language. Table 9 lists examples of the kinds of visuals that are appropriate for each content area.

Examples of How to Integrate Visuals into Different Content Areas

	Include Visuals
Art Mathematics Music Physical Education	• Show dioramas, photographs, drawings, paintings, or sculptures. • Use counters, currency, pattern blocks, fraction circles, base-10 blocks, geoboards, or a Promethean board. • Show students how to correctly hold an instrument. • Tap the rhythm of a selection before asking students to play it. • Watch instructional videos of techniques. • Demonstrate correct versus incorrect formation.

Integrate Engaging Vocabulary

Vocabulary is the knowledge of words and the meaning of words. It has been powerfully linked to reading comprehension and overall academic success because without having a deep knowledge of words, students will be limited in their ability not only to understand connected texts but also to use context appropriately to decipher the meanings of newly encountered words (Lehr, Osborn, and Hiebert 2004). Teachers cannot leave vocabulary development to chance because many students do not read widely, do not learn words incidentally, and are not able to use the dictionary to effectively learn word meanings. Instead, teachers must teach vocabulary explicitly, which includes talking about words while using visual aids to clarify meaning, modeling how to use words in context, and providing students with opportunities to interact with words on repeated tasks. When teachers teach vocabulary, they must teach words that are critical for students to best internalize concepts (Greenwood 2002).

Examples of How to Integrate Engaging Vocabulary into Different Content Areas

	Integrate Engaging Vocabulary
Art Mathematics Music Physical Education	• Use typographic clues to signal important vocabulary while reading a piece of text. • Use a semantic feature analysis table to determine what key vocabulary terms learned during the lesson have or do not have in common. • Use a word of the day activity where multiple sources are referenced to find out as much as possible about a word prior to the beginning of a lesson. • Use a semantic feature analysis table to determine what key vocabulary terms learned during the lesson have or do not have in common.

Ming, K. (2012). 10 content-area literacy strategies for art, mathematics, music, and physical education. *Clearing House, 85*, p. 219. doi:10.1080/00098655.2012.691568.
(Use with permission from the publisher Taylor & Francis)

Appendix F: Handout 5

Chant and Cadence-Example for Social Studies

My First Amendment Rights

I don't know but I've been told
Our constitution's mighty bold.
They made some changes to protect
Freedoms we've come to expect.
The First Amendment keeps in sight
These freedoms that we call our rights.
Any religion of my choice,
I'm allowed to give a voice.
I don't know but I've been told
Our constitution's mighty bold.
The First Amendment gives in kind
The sacred right to speak our minds.
The First Amendment has no less
Eternal freedom of the press.
I don't know but I've been I've been told
Our constitution's mighty bold.
This same amendment gives the right
For us to gather as we like.
And if they take these rights away
Our courts will let us have our say.
I don't know but I've been I've been told
Our constitution's mighty bold.
(Chant to "I Don't Know What I've Been Told" or "Sound Off," also known as "The Duckworth Chant")

Chant and Cadence-Example for Math

Please Excuse My Dear Aunt Sally

I don't know what I've been told
How math equations must unfold
The answer's here at this math rally
"Please excuse my dear Aunt Sally"
She will help us understand
Equations that we have on hand
Look to her for the right way
A math foundation, she will lay
PEMDAS is her other name
Remember this and you've got game!
Sound off,
PEMDAS
Sound off,
PEMDAS
Please excuse my
Dear Aunt Sally!
She's an acronym to know
How operation orders go
Parentheses is where we start
Grouping numbers is their art
Work the problem left to right
Teacher says, "You're Dynamite!"
Exponents, the next concern
Do them now, 'cuz it's their turn
Sound off,
PEMDAS
Sound off,
PEMDAS
Please excuse my
Dear Aunt Sally!
Multiply and then divide
Show your work with grace and pride
Almost done, now that's a fact
Last you add and then subtract
Remembering Aunt Sally's rule
Always makes our math class cool!
Sound off,
PEMDAS
Sound off,
PEMDAS
Please excuse my
Dear Aunt Sally!
(Chant to "I Don't Know What I've Been Told" or "Sound Off," also known as "The Duckworth Chant")

Chant and Cadence-Example for English

Verbs

Verbs are active let me see,
What they really mean to me.
When I need to *jump* or *play*,
Verbs are types of words I say.
When I *eat*, *sleep*, *run*, or *walk*,
I use a verb when I *talk*!
Am and *is are* verbs as well,
Just like *skip* and *run* and *tell*
Action, action they do say
We use verbs like them each day.
Sound off 1, 2
Sound off 3, 4
Sound off 1, 2, 3, 4
Go Verbs!
(Chant to "I Don't Know What I've Been Told" or "Sound Off," also known as "The Duckworth Chant")

Chant and Cadence-Example for Science

Rainforests Have Four Layers
Rainforests have four layers
o-e-o-e-o
emergent layer is on top
o-e-o-e-o
with high winds here
and monkeys there
here a drip
there a drop
everywhere a drip-drop.
Rainforests have four layers
o-e-o-e-o
and **canopy** is right below
o-e-o-e-o
with iguanas here
and pythons there
here a chimp
there a sloth
everywhere a flying moth
Rainforests have four layers
o-e-o-e-o
look out for the **understory**
o-e-o-e-o
with jaguars here
red-eyed tree-frogs there
here a bug
there a bat
everywhere a stalking cat
Rainforests have four layers
o-e-o-e-o
and last to come is **forest floor**
o-e-o-e-o
with gorillas here
tarantulas there
here a plant
there an ant
everywhere a logger's chant
Rainforests have four layers, o-e-o-eoooooooooooooooooooooooo!
(Sing to the tune "Old MacDonald")

Ciecierski, L., & Bintz, W.P. (2012). Using chants and cadences to promote literacy across the curriculum. Middle School Journal, 44(2), 22-29. http://doi.org/10.1080/00940771.2012.11461844

Appendix G: Semi-structured Interview Questions

Research Question One

How do teachers perceive the four different elements of the TAP Framework?

Interview questions.

- Tell me about your initial attitudes about the TAP framework?

(Prompt: Were you in support of the implementation? Why or why not?)

- Tell me about your attitudes now about the TAP framework.
- In your own words, tell me about your understanding of the four elements of the TAP framework.

(Prompt: Multiple Career Path, On-going Applied Professional Growth, Instructional Focus Accountability, and Performance Based Compensation).

- The TAP founder, Milken, once said that it was essential to implement all four elements of the TAP to ensure the student achievement, what is your opinion on that? (Prompt: If not, which one of the elements do you agree with the most? Why? Which one do you disagree with the most? Why?)

Research Question Two

To what extent were the experiences of the implementation of the TAP Framework challenging and/or rewarding to the teachers involved?

Interview questions.

- Tell me about your most rewarding experiences you had in implementing the TAP process.

- Tell me about your most challenging experiences you had in implementing the TAP process.
- What kind of preparation need to be done to make the implementation less challenging for you?

Research Question Three

How does the TAP process change teachers' instructional practices in the classroom?

Interview questions.

- Reflect on your instructional practices since the implementation of the TAP, have you noticed any difference in your own classroom?
- Reflect on the turning point of the change in practices.

Research Question Four

How does the Native American cultural setting influence the implementation of the TAP school reform framework?

Interview questions.

- In your opinion, how does the Native Culture impact the process of the TAP implementation?

Appendix H: Research Study Consent Form

REASEARCH STUDY CONSENT FORM

You are invited to take part in a research project of your experience in the implementation of the Teacher Advancement Program at Chinle Unified School District. You are being asked to volunteer to participate in this study because of your position in the teaching staff at one of the schools in the district. Please read this form and ask any questions you may have before agreeing to be part of the project.

This study is being conducted by a researcher named Shing Aruguete, who is a doctoral student at Walden University. Shing Aruguete is also the academic coach at Canyon de Chelly Elementary School.

Background Information:

The purpose of this study is to gather information needed to learn about the participant's experiences with the implementation of the TAP at each school site.

Procedures:

If you agree, you will be asked to participate in an audio-recorded in-depth interview, lasting about 45 minutes to one hour. There will be a follow-up interview to clarify any questions that may emerge from the 1st interview session. In addition, there will be two classroom walkthrough observations (each will last about 10-15 minutes) in your classroom after the interview sessions. Your IGP and lesson plans will also be collected for triangulation of the interview and classroom observation data.

Voluntary Nature of the study:

Your participation in this study is voluntary. This means that everyone will respect your decision of whether or not you want to be a participant. No one at your school site will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. If you feel stressed during the study, you may stop at any time. You may also skip any questions in either interview that you feel are too personal.

Risks and Benefits of Being in the study:

There is the minimal risk of psychological stress during this study. If you feel stressed during the study, you may stop at any time. There are no benefits to you from participating in this study. The interviewer will benefit by collecting necessary data for her study.

Compensation:

There is no compensation for participating in this study.

Confidentiality:

Any information you provide will be kept confidential. The researcher will not use your information for any purposes outside of this doctoral project. Also, the researcher will not include your name or anything else that could identify you in any reports of the interview and observation data results collected in the study.

Contacts and Questions:

The researcher's name is Shing Aruguete. The researcher's Committee Chair is Dr. Billie Andersson. You may ask any questions you have now. Or if you have questions later, you may contact the researcher via 928-310-8213 or shing.aruguete@waldenu.edu or the Committee Chair at billie.andersson@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Director of the Research Center at Walden University. Her phone number is 1-800-925-3368, extension 1210.

The researcher will give you a copy of this form to keep.

Statement of Consent:

☐ I have read the above information. I have received answers to any questions I have at this time. I am 18 years of age or older, and I consent to participate in the research study.

Printed Name of Participant _____

Participant's Written or Electronic* Signature _____

Researcher's Written or Electronic* Signature shing.aruguete@waldenu.edu

Electronic signatures are regulated by the Uniform Electronic Transactions Act. Legally, an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically.

Appendix I: Classroom Observational Protocol Form

Classroom Observational Protocol Form

Grade Level & Content	
Student orientation to work (3 minute)	Evidence of student engagement • • • • •
Curricular decision point (3 minutes)	Evidence of alignment of the curriculum (i.e. the posting of accurate content standards and learning objective, aligned learning activities and materials during the lesson, etc.) • • • • •
Instructional decision Point (3 minutes)	Evidence of instructional practices, such as student grouping strategy, academic feedback, teacher questioning strategy, etc. • • • •
Walk the walls (learning environment) (3 minutes)	Evidence of student product, teacher-made charts, past quiz paper, etc. • • • • •

Adapted with permission from Downey et al., (2010). *Advancing the three-minute walk-through: Mastering reflective practice one teacher at a time.* Thousand Oaks, CA: Corwin.