Northwest Regional Professional Development Program

Self-Evaluation Report

2016 - 2017

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Executive Summary

During the 2016-17 school year, the Northwest Regional Professional Development Program (NWRPDP) facilitators supported 2,059 teachers and administrators in a variety of content areas across the region's six districts. Support for diverse learners and parent/family engagement were an integral part of trainings and workshops. Focus areas included, but were not limited to:

- Ongoing in-depth training and exposure to the Nevada Academic Content Standards (NVACS) in mathematics content that included a year-long math certificate program serving K-8 teachers to increase their content knowledge and teaching competencies in math.

- Literacy and English trainings based on the Nevada Academic Content Standards (NVACS) for PreK-12-based Literacy development and reading strategies with particular focus on writing using the methods of Lucy Calkins and Being a Writer.

- Collaboration between NWRPDP facilitators and the Nevada Department of Education (NDE) to support the revision of Nevada Academic Content Standards (NVACS) in social studies. Facilitators developed and completed a nine-month professional learning cohort with novice social studies teachers resulting in significant gains in classroom effectiveness, management, and pedagogy.

- Professional learning workshops and activities that focused on the incorporation of NVACS-Science and STEM Standards (based on the Next Generation Science Standards [NGSS]) —made possible through the Great Teaching and Leading Fund grant.

- STEM activity teacher trainings on aerial and underwater vehicles through collaborations with university and regional experts—made possible from the College and Career Ready (CCR) grant.

- Teacher Leader development through a cohort model to increase teacher leadership, retention, and recruitment—made possible through the Great Teaching and Leading Fund grant.

- Cohorts of teachers studying for their National Board Certification —made possible by support from the Nevada State Educators Association and the Great Teaching and Leading Fund grant.

- Teacher Leader development focused on increasing skills in leading collaborative teams for PLC work and studying student data.

- Focused support of Parent and Family Engagement in curriculum and teaching practice that included the completion of a year-long Family Engagement project for Pre-K level teachers.

- Professional learning opportunities in understanding the Nevada Educator Performance Framework (NEPF) Instructional and Professional Responsibility Standards for teachers and administrators.

The following report details the scope, content, type, and impact of services that the NWRPDP performed within its six districts during 2016-17. This includes 13 narrative evaluation case studies which are representative of the program's overall service to our region and which share a common philosophy of standards-based professional learning delivered in the context of district and school plans. Included in each project is a long-term commitment to ongoing support for teachers and administrators in order to sustain professional learning. The case studies, which share the story behind the work of our learning facilitators this year, cover a wide range of subjects that include: increasing teacher learning with respect to the NVACS in literacy (reading and writing), math, science, and STEM; support for novice teachers in secondary social studies; increasing family engagement; developing capacity for leading collaborative teams; and promoting teacher leadership competencies to address recruitment, retention, and professional learning.

Key findings:

- Case study evaluation data reveal a variety of positive outcomes across NWRPDP 2016-17 case study projects. Examples include significant growth in the development of writing communities and implementation of student writing curricula from teachers in the second year cohort of the multi-year Early Literacy Cadre; significant improvements (<.001) in NVACSS Earth/Space science knowledge, pedagogy, and student/family engagement strategies among teachers in five districts; significant increases in math skills, content knowledge, and teaching efficacy among K-8 teachers; significant increases (<.01) in teacher knowledge of NVACS standards, strategies to engage and motivate students, and integration of questioning and discourse in social studies; increased efficacy for teachers in leading collaborate groups; and, increased teacher knowledge and implementation of parent classroom involvement among PreK-third grade teachers and administrators.

- Professional development services were conducted in all six districts that comprise NWRPDP, reaching a total of 2,059 unique educators during 2016-17. Because professional development covers varied training topics and consulting services, the total number of duplicated educators receiving services was 4,962. These robust numbers represent slight declines from 2015-16 when statewide mandates made that an unusually high training year, but represent increases over the numbers of educators NWRPDP served in 2013. Elementary teachers (total served = 3,125) again were the

largest educator group served this past year, followed by Middle school teachers (687), High school teachers (403), Others, which include substitutes, counselors and district personnel (555), and Administrators (192). Overall, 43% of the approximate 4,786 educators employed in the region participated in programs provided by the NWRPDP during 2016-17.

- Participant ratings of the quality of professional development trainings performed by NWRPDP staff reveal consistent and very high satisfaction ratings over the past several years (all mean ratings of trainings have been between 4 and 5, on a 5 point scale). During 2016-17, this included high mean ratings from educator participants regarding the expertise of the facilitators (4.8) and the quality of the delivery of instruction during trainings, particularly providing opportunities for interaction and reflection (4.8). In addition, educator participants again indicated overwhelmingly that they will use the knowledge and skills learned from NWRPDP trainings in their classrooms (4.7).

- Results indicated that 80% of this past year's training participants had attended previous NWRPDP professional development activities, and of those, a large majority (4.28 mean on a 5 point scale, with 1 specifying 'Not at all' and 5 'To a great extent') indicated that their participation had markedly changed their teaching instruction or administrator responsibility.

- Professional services this past year were predominately delivered at school sites or professional learning sites in the form of in-service classes and workshops. Content focused mainly on the Nevada Academic Content Standards (NVACS) in math, literacy, and science/STEM, the Nevada Educator Performance Framework (NEPF), and PreK-third grade supports.

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Introduction:
Professional Learning Supports State Standards in Education

Teacher quality has long been found to have a considerable impact on student learning and achievement (Meister, 2010; Opfer & Pedder, 2011), and professional development is the primary strategy for affecting teacher quality (Lytle, 2008). This report details the self-evaluation efforts of the Northwest Regional Professional Development Program (NWRPDP) in providing training and professional development to the region's educators. This evaluation integrates several widely accepted educator professional development frameworks, including Desimone's (2009) and Guskey's (2002) conceptual frameworks that identify critical features of how professional development can influence teacher and student outcomes (see Figure 1 and Table 1). These frameworks provided guidance for the planning, implementation, and assessment of all professional development activities conducted by the NWRPDP in 2016-17. The following report details the results of the case study approach used to assess the impacts of professional development activities and projects. Taken as a whole, the various case studies highlight the range of training topics conducted—which employ mixed-method evaluation strategies advocated by Killion (2002)—and are consistent with the educator professional development evaluation frameworks noted above (Desimone, 2009; Guskey, 2002). NWRPDP staff actively design and implement each evaluative case study that seeks to illustrate changes in teacher practice and student learning as a result of the diverse professional learning activities employed over the past year.

Figure 1. Conceptual framework for studying the effects of professional development on teachers and students (Desimone, 2009)
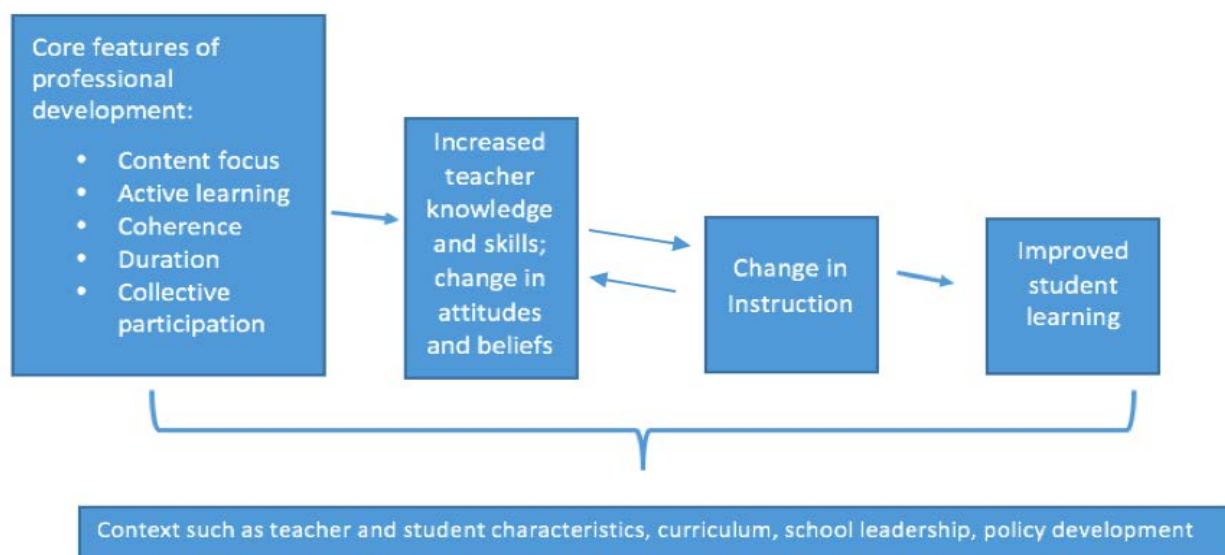
Table 1. Guskey's (2002) five levels of professional development evaluation

The Five Levels of Guskey's (2002) Professional Development Evaluation	
Evaluation Level	**What questions are addressed?**
1. Participants' Reactions	Did they like it? Was their time well-spent? Did the material make sense? Will it be useful? Was the leader knowledgeable and helpful? Were physical comforts attended to?
2. Participants' Learning	Did participants acquire the intended knowledge and skills?
3. Organization Support and Change	Was implementation advocated, facilitated, and supported? Was the support public and overt? Were problems addressed quickly and efficiently? Were sufficient resources made available? Were successes recognized and shared? What was the impact on the organization? Did it affect the organization's climate and procedures?
4. Participants' Use of New Knowledge and Skills	Did participants effectively apply the new knowledge and skills?
5. Student Learning Outcomes	What was the impact on students? Did it affect student performance or achievement? Did it influence students' physical or emotional well-being? Are students more confident as learners? Is student attendance improving? Are dropouts decreasing?

The 2016-17 school year brought a new focus on the Nevada Academic Content Standards (NVACS) in social studies. NWRPDP facilitators collaborated with the Nevada Department of Education (NDE) to aid in the revision of these state standards. Support continued for English language arts and mathematics in the region. Reading was supported at the secondary level through close reading strategies and disciplinary literacy strategies. Writing received extra emphasis this year through workshops and school focus on the methods of Lucy Calkins and Being a Writer. Training in primary grade literacy was offered through a cadre model for PreK-2nd grade teachers. Math received attention through site-based math facilitators and peer observation projects. A year-long math certificate program was put in place to serve K-8 teachers wanting to increase their content knowledge and skills in teaching math. Repeat collaboration with the Washoe County School District in writing the Great Teaching and Leading Fund (GTLF) grant brought a second round of funding to the entire Northwest region to provide targeted training and follow-up on the NVACSS and STEM (based on the Next Generation Science Standards-NGSS). Included in the GTLF grant was support to extend the teacher leadership cohort to sustain the learning of effective teachers and to increase retention and recruitment. Also included in the GTLF was support for cohorts of teachers studying for their National Board Certification. The College and Career Ready (CCR) grant enabled NWRPDP to launch STEM activities with aerial and underwater vehicles through collaboration with university and local experts. Teachers at the Pre-K level received ongoing support and a year-long family engagement project was completed. Administrators received deeper level

information regarding The Nevada Educator Performance Framework (NEPF) with professional learning support from the RPDPs. NWRPDP facilitators served on national and state committees with representatives from higher education, Departments of Education from several states, and national leaders in education. Other collaborators included University of Nevada, Reno (UNR), Nevada Education Association, and Sierra Nevada Journeys.

History:
Teacher and Student Performance in an Age of Standards

The Regional Professional Development Program was established by Nevada Revised Statue (NRS) 391.512 in 1999 to provide research-based professional development opportunities to all of the school districts in Nevada. The organization was further directed by NRS 391.544 to focus on training teachers in the standards which were established by the Council to Establish Academic Standards for Public Schools (NRS 389.520) and to establish and implement the Nevada Early Literacy Intervention Program (NELIP). Additionally, the regional program was directed to provide training in one or more of the following: using assessment and measurement of pupil achievement including methods of analyzing data to improve student achievement, instruction in content areas including methods of instruction, training in methods to teach basic skills to students in reading and mathematics, or training for educators who provide instruction to pupils who are limited English proficient. Originally set up as a Trainer of Trainers model, where teacher leaders from each site were trained as Site Trainers responsible for training their colleagues, the program moved to a model based on the National Staff Development Council (NSDC) standards for professional development which includes facilitation of learning, follow-up observations, and coaching with educators. As the trend in professional development moved towards Professional Learning Communities, the *Standards for Professional Learning* developed by Learning Forward, formerly NSDC (see Appendix A), were adopted in 2013. Additionally, the legislature included parent education for teachers as a focus for the regional professional development programs in 2011 (NRS.391.544). In 2013, legislation tasked the RPDPs with supporting training for teachers and administrators in the newly adopted Nevada Educator Performance Framework (NEPF) standards and indicators for evaluation of teachers and administrators (NRS.391.31217).

Implementation of Curriculum Standards
Trainers facilitated teacher learning on content and instructional strategies representing research-based best practices to increase student achievement. Programs were developed to facilitate the movement to standards-based instruction and to improve student achievement through improved teacher skills using backward lesson design (Wiggins & McTighe, 2005), engagement strategies (Marzano, Pickering, & Pollock, 2001; Kagan, 1990; Intrator, 2004), differentiated instruction (Rutherford, 2008; Silver & Strong, 2007; Tomlinson, 2000; Tomlinson & McTighe, 2006), and assessment (Stiggins, Arter, Chappuis & Chappuis, 2004).

The adoption and implementation of the Nevada Academic Content Standards (NVACS), based on the Common Core, resulted in shifts in curriculum, assessment, and instruction. Full

implementation was required for the 2014-15 school year. In May of 2014, the Next Generation Science Standards (NGSS) were adopted, which resulted in the need to shift a third major content area to new content and instruction. With the new focus on performance expectations in science, an additional consideration was how to provide materials for hands-on science learning opportunities for teachers. In 2015, official use of the state evaluation system for educators (Nevada Educator Performance Framework – NEPF) required all teachers and site administrators to receive support on the framework. In 2017, Student Learning Goals (SLGs), included in the NEPF, became the official data to be attached to educators' evaluations. Regional Learning Facilitators continue to serve on national and state-wide committees to plan for the changes in content, instruction, and assessment that drive the implementation of the NVACS in literacy, math, science, STEM, and social studies.

Nevada Early Literacy Intervention Program (NELIP)
The NWRPDP continued to provide training and support for area teachers as they implemented the Nevada Early Literacy Intervention Program (NELIP), established in 2001. NELIP was specifically funded for the 2001-2003 biennium. However, for the 2003-2005 biennium, "funding for NELIP was consolidated with the RPDPs; this resulted in a State General Fund savings of approximately $1.2 million compared to the amount appropriated for the 2001-2003 biennium" (2007 Nevada Education Data Book, p. 161). Even without specific funding, the RPDPs have continued to include standards for literacy and instruction in the content areas in the early grades. The NWRPDP Kindergarten Cadre project supported Kindergarten teachers with training in phonemic awareness, phonics, vocabulary, fluency, comprehension, and student motivation in Washoe County along with other institutes for K-3 teachers. In the 2015-16 school year, NWRPDP expanded early literacy to include Pre-K to support alignment of Pre-K through third grade standards.

Collaboration
The NWRPDP has worked collaboratively with researchers, universities, and fellow professional learning facilitators over the years to better support the educational community in the region.

University of Nevada, Reno:
Several programs have grown out of the collaboration between the NWRPDP and the University of Nevada, Reno (UNR). The Northern Nevada Writing Project (NNWP), which started as an institute to support site trainers, still conducts institutes and on-going trainings for teachers in northern Nevada. During the summer of 2014, the NWRPDP collaborated with UNR on a Mathematics and Science Partnership (MSP) grant which provided content and instructional strategies training in mathematics content and pedagogy to over sixty teachers from all six counties served by the NWRPDP. Science collaboration has been consistently strong with Dr. David Crowther of UNR and Dan Ruby, Director of the Fleischmann Planetarium at UNR. The NWRPDP also has enlisted the help of UNR professor, Dr. Bill Evans, to help guide the NWRPDP evaluation planning activities and annual report. Historically, a UNR representative sits on the local Governing Board.

Nevada Department of Education:

The NWRPDP has a long history of collaboration with the Nevada Department of Education (NDE). Early collaborations included support of the Student Achievement Gap Elimination (SAGE) initiative. This was followed by the initial data gathering efforts by Huck Fitterer of WestEd Laboratories, which lead to the *Data in a Day*, a teacher observation protocol, which later evolved into the *Teach for Success* protocol and the *T4S Observation Protocol and Program*, still in use in some districts today.

The NWRPDP supported the NDE during the introduction of the Depth of Knowledge (DOK) initiative in 2009 and provided training for educators in the region, which continued as the state moved towards the implementation of the Smarter Balanced Assessment Consortium instruments.

In 2010, extensive collaboration with the Nevada Department of Education (NDE) began as the state started to transition to the Nevada Academic Content Standards (NVACS). Initial collaboration focused on developing professional development to introduce educators to the new standards and included facilitators from all three regional programs as well as NDE personnel. Collaboration continued with the NDE and local districts to ensure successful implementation of the new standards and a smooth transition to the new assessments. During the 2014-15 school year, RPDP collaborations with NDE served to provide resources for teachers on the NDE website in support of math, English language arts, and the new NVACS in Science, based on the Next Generation Science Standards. Additionally, NWRPDP facilitators helped develop the Nevada State Literacy Plan during the 2014-15 school year.

During the 2015-16 school year, the NDE included NWRPDP learning facilitators in the development of remediation materials for the high school End of Course (EOC) exams in math and English language arts. Ongoing collaboration also continued in support of the Nevada Educator Performance Framework (NEPF) as the state evaluation system went live during this year.

Social studies standards were due for revision during the 2016-17 school year. NWRPDP collaborated with NDE to provide experts in the social studies area in support of the revisions. NWRPDP also attended state math meetings and participated in the state Birth to Third Grade grant. Additionally this year, an RPDP collaboration was begun with NDE to develop a state wide family engagement professional learning sequence.

Other Regional Professional Development Programs

In 2010, extensive collaboration with the other Regional Professional Development Programs (RPDPs) also was enacted to plan for the introduction of the NVACS, based on the Common Core. This collaboration continues and includes curriculum development and implementation strategies for educators. In 2013, adoption of the new teacher and administrator evaluation framework, the NEPF, began a statewide collaboration across all three regions to implement this new program with a common message and language. During 2013-15, the RPDPs collaborated with NDE and WestEd in the execution of a validation study of the NEPF system.

The RPDPs across the state collaborated in 2015-16 in an NDE-sponsored effort to develop a state science plan. For the 2016-17 school year, the RPDPs worked together to provide offerings for training in computer science in consort with Code.org. Collaboration continues in order to maintain consistent messaging and support for the NEPF as the system becomes embedded and data becomes associated with evaluation through student learning goals. NWRPDP collaborated on another MSP grant during the 2016-17 school year (MANTA) that included all three RPDPs with Dr. David Vallette of UNLV and Dr. David Crowther of UNR as principal investigators.

Future Direction

Recent legislative decisions continue to require educators to increase awareness of aligning resources and systems to support positive outcomes for students at all levels (Nevada Department of Education, 2013). To that end, the Nevada Regional Professional Development Programs serve a crucial role in supporting the ongoing professional learning of teachers and administrators.

The future direction of the Northwest RPDP is consistent with the expectations of the legislators, educators, students, and families of our state. In order to increase the learning of our students, ongoing support of the NVACS will be an ongoing focus. Developing pedagogical expertise and sharing curriculum resources to meet the demands of state standards will continue to be an important aspect of our work in collaboration with the Nevada Department of Education, our colleagues in the other two Nevada regional professional development programs, local universities, and district personnel. Supporting our teachers and administrators in aligning curriculum and instruction with assessment will be crucial, as will developing deeper understanding of how to evaluate the success of our classroom practices in terms of our students' learning growth. With this alignment in mind, the NWRPDP will continue to develop training and materials to expand professional learning opportunities for educators throughout the region while integrating 21st century skills and technology appropriate to the needs of each of our districts. It is a goal of the NWRPDP to support the uniqueness of each of our districts, whether urban or rural, and to provide services accordingly.

NWRPDP is committed to ongoing support of regional educators for implementation of the NVACS, with emphasis this year on the updated social studies standards. Parent Involvement/Family Engagement will continue to be embedded in the NWRPDP work with teachers and expanded through collaboration between the Statewide Council for the Regional Training Programs and the State Parent Involvement and Family Engagement Council. The Nevada Educator Performance Framework (NEPF) for all educators will be an ongoing priority as we move into the next phases of application and use of student learning goals. New legislation from the 2017 Nevada Legislative Session will require interpretation. Therefore, in accordance with legislation, district priorities, and the needs of our students and educators, the NWRPDP will continue to provide professional learning that aligns with the State *Nevada Ready Plan (2017-2021),* the *Education 2020* Characteristics of Quality Professional Development (2014), and the federal Education Law Title 20 U.S.C. 7801(34):

- Continuous learning, not one-time seminars,
- Focused on improving classroom practices that increase student learning,
- Embedded in the daily work of teaching,
- Centered on crucial teaching and learning activities around our new content standards,
- Cultivated in a culture of collegiality around the same student improvement objectives,
- Supported by modeling and coaching that reflects 21st century skills, and
- Based on research-based best practices.

In partnership with our colleagues and communities, providing high-quality professional learning for teachers and administrators to support the needs of Nevada's students in the northwest region remains at the forefront of the Northwest RPDP's goals.

Elevating Teaching and Learning!

Our Vision: Nevada's Northwest Regional Professional Development Program, in accordance with the Nevada Revised statutes, is committed to elevating teaching and learning by providing sustained professional development and building regional partnerships.

Our Mission: Nevada's Northwest Regional Professional Development Program (NWRPDP) collaborates with stakeholders to provide high quality learning opportunities that are aligned with the Nevada Professional Learning Standards and the Nevada Academic Content Standards. NWRPDP offers diverse professional learning opportunities and support based on current empirical research on effective instruction for student learning. We are committed to increasing communication between regional members and families in order to develop capacity among all partnerships and to increase student achievement.

Self-Evaluation Overview

Self-Evaluation Procedures
As outlined in NRS 391A.190, Director Kirsten Gleissner, Ph.D., directs the in-house evaluation, assisted by support staff who coordinate data collection and compilation. The Director and an outside consultant, Dr. Bill Evans from UNR, provide support for the rest of the team as they develop logic models, design instruments to gather and analyze data, and create, implement, and write their evaluative case studies. The case studies, based on the Killion (2002) staff development evaluation model, and aligned with recent teacher professional development frameworks (Desimone, 2009; Guskey, 2002), provide in-depth analysis of specific professional development projects, while showcasing the diversity and scope of the support provided by the NWRPDP to schools and educators in the region. These evaluation projects employ both qualitative and quantitative designs and incorporate mixed-methods data collection strategies to assess training outcomes. Collectively, they help to 'tell the story' and document the impacts of the diverse NWRPDP professional development activities this past year. An inclusive logic model depicting NWRPDP activities is shown in Figure 2. This conceptual model presents the

overall professional development resources (inputs) and activities (outputs), and links them to the short, medium, and long term outcome objectives of the NWRPDP.

In addition to the case studies, this report describes the results of educator participant ratings of NWRPDP trainings and educational events, and the scope, type, and participant numbers of trainings that staff completed during 2016-17.

Figure 2. Northwest RPDP Logic Model 2016-17

NWRPDP Logic Model 2016 – 2017

Situation: The Northwest Regional Professional Development Program supports the professional learning of teachers and administrators in a variety of content areas across the region's six school districts.

INPUTS	OUTPUTS		OUTCOMES – IMPACT		
	Activities	*Participation*	*Short-Term*	*Medium-Term*	*Long-Term*
NWRPDP Staff	Trainings/ In-services	Teachers	Increase/Maintain Participation/ Engagement	Change in instructional practice	Enhanced student achievement
Budget	Consultation/ Collaboration	Administrators	Develop Opportunities For Teacher Leadership	Implementation of workshop goals/targets	- Close achievement gap - Increase grad. rate
Governing and State Boards	Coaching/ Observation			Enhanced teaching self-efficacy	- Read by Three - College/career readiness
Facilities	Developing Resources For Educators	Support staff	Increased Content Knowledge	Change in administrator/ teacher attitudes/ practice	Increased teacher retention
Partners: UNR; RPDPs, Schools Districts NDE	Educational Advocacy Improved Systems For Data collection	Parent/family engagement Community	Enhanced Pedagogy **Measures:** Training Ratings Case Studies	**Measures:** Case studies	Stable, sustained funding **Measures:** Existing school, district, and state educational data

ASSUMPTIONS	EXTERNAL FACTORS
• Continued Funding • Positive Attitudes and Beliefs about Professional Practice	• State, District, and School Site Contexts • Teacher and Stakeholder Expectations and Requirements • Teacher/Substitute shortage • Requirements from State and Educational Policy

Legislative Requirements

Nevada Revised Statue (NRS) 391A.190 established the requirements for data collection used by the RPDPs in the evaluation process. Areas specifically identified for documentation in the NRS include content standards, reading and math literacy, assessment, Nevada Early Literacy

Intervention Program (NELIP), meeting the diverse needs of students including English Language Learners, Parent Involvement and Family Engagement support for teachers, Nevada Educator Performance Framework (NEPF), and on-going follow-up to trainings. Optional areas for documentation identified in the NRS include educational technology, model classrooms, training for paraprofessionals, and suicide prevention.

Statewide Coordinating Council & Governing Board Requirements

The Statewide Coordinating Council and the Governing Board have established the instrument used by the RPDPs to collect participant evaluation data. The RPDP Activity Evaluation form (see Appendix A), which uses Likert-type scale items, is used to collect data from participants regarding the effectiveness of the professional development provided by regional facilitators. An area for comments also is provided to collect qualitative input.

Services can be requested through direct contact with a facilitator or the director. An initial consultation is scheduled to determine the most effective format, timeline, and content. The updated Contact Form (see Appendix B) provides data including length of the training, group demographics, primary focus of the service provided, and type of service provided. A data tracking method through Google Docs provides additional information regarding initiation, type, and delivery of services by each facilitator in each of the counties served, and more specific data regarding the distribution of services throughout the region. Results from this data collection provided information for this document. In 2010, the Assembly Committee Resolution 2 (ACR2) Report was established to provide districts with information about the trainings provided.

Professional Development Standards

In 2013, the Nevada State Professional Development Standards were replaced by the Learning Forward *Standards for Professional Learning* (see Appendix C). Since that time, trainings have been assessed against the new standards during the planning, delivery, and reflection phases using a rubric (Appendix C). The *Standards for Professional Learning* were reconfirmed by the Statewide Coordinating Council in 2015.

How is the NWRPDP organized?

The NWRPDP is composed of 14 full-time Learning Facilitators, under the direction of Director Kirsten Gleissner, Ph.D. Support is provided by three full-time regional support professionals. In 2016-17, four additional part-time facilitators served the region in continuing support for the NEPF. The NWRPDP provides services to Carson City, Churchill, Douglas, Lyon, Storey, and Washoe counties. Nine of the learning facilitators operate out of the Reno office, one facilitator coordinating services in Lyon County. One facilitator serves as liaison for each of the other rural counties and is housed in that district. Learning Facilitators are selected based upon their expertise covering all K-12 grade levels, plus the content, standards, and literacy requirements of the state professional development legislation. Facilitators average almost 20 years of teaching and/or administrative experience with a minimum of a master's degree.

The Statewide Coordinating Council
NRS 391A.130 establishes the Statewide Coordinating Council (SCC), with direct responsibility to coordinate and disseminate information regarding training, programs, and services across the regions; to adopt uniform procedures for professional development and evaluation; and to conduct long-term planning for the program.

As defined in NRS 391A.130, the SCC currently consists of nine members: the Superintendent of Public Instruction or his or her designee; one member who is not a Legislator, appointed by the Majority Leader of the Senate and one appointed by the Speaker of the Assembly; one teacher appointed by the Governor from a list of nominees submitted by the Nevada State Education Association; one administrator at a public school (not at the district level) appointed by the Governor from a list of nominees submitted by the Nevada Association of School Administrators; one member appointed by the Governor; three members, each of whom is a superintendent of schools, or designee, appointed by each of the Governing Boards.

The Governing Board
NRS 391A.150 establishes a governing body for each regional program and the membership of that body. Membership consists of the superintendent of schools or his/her designee for each school district served by the NWRPDP, a master teacher appointed by the superintendent of each represented district, representatives of the Nevada System of Higher Education, and a non-voting member of the Nevada Department of Education.

The duties of the Governing Board include the following:
- Selection of the program coordinator/director
- Annual review of budget
- Acceptance of gifts and grants
- Adoption of a regional training model
- Needs assessment of regional teachers and administrators
- Review of the five-year plan

The NWRPDP Governance Board members for 2016-17 were alphabetically: Scott Bailey, Chief Academic Officer, superintendent designee, Washoe County School District; Barbara Barker, Washoe County master teacher; Dave Brancamp, Nevada Department of Education; Dr. Melissa Burnham, appointed by the Dean of the College of Education, University of Nevada, Reno; Rommy Cronin, Curriculum and Instruction Director, superintendent designee, Douglas County School District; Jim Gianotti, Curriculum and Instruction Director, superintendent designee, Lyon County School District; Kirsten Gleissner, Director, NWRPDP; Susan Keema, Associate Superintendent of Educational Services, superintendent designee, Carson City School District; Kimi Melendy, Curriculum and Instruction Director, Churchill County master teacher; Jamie Nerska, Douglas County master teacher; Candi Ruf, Carson City master teacher; Dr. Sandra Sheldon, Superintendent, Churchill County School District; Dr. Robert Slaby/Todd Hess, Superintendent, Storey County School District; Karen Staffen, Storey County master teacher; Amber Westmoreland, Lyon County master teacher; and Pamela K. Mills, NWRPDP

Administrative Assistant. Susan Keema served as chair of the Governing Board in school years 2015-2017.

Governing Board meeting agendas can be found in Appendix D.

Long Range Planning
As required by legislation, the Statewide Coordinating Council (SCC) reviews long-range planning for the three state RPDPs in the form of a five-year plan developed in collaboration with the Governing Board (see Appendix E). The current plan runs from 2012-2017 with a yearly review. NWRPDP Director Kirsten Gleissner uses the five-year plan's goals as a guide to inform the northwest region's annual goals.

Goal 1: Implement the Nevada Professional Development Standards
In the 2012-2013 school year, the Statewide Coordinating Council (SCC) adopted the *Standards for Professional Learning* (Learning Forward, 2011, see Appendix C) for use by the regional professional development programs to replace the Nevada Professional Development Standards. The NWRPDP used the new standards as an ongoing form of self-assessment for collecting data regarding the implementation of projects used in the case studies documented in this report and for assessing the year's work. The Standards were reconfirmed by the SCC in 2015.

Goal 2: Design and implement high quality Professional Development for teachers to improve student achievement
Professional development (PD) is often initiated by requests from district or site administrators based on goals in their District Performance Plans or School Performance Plans. PD is supported by research and conducted as part of a reflective inquiry cycle which includes assessment, analysis, and feedback to ensure consistent high quality programs. Logic models are used to guide planning and reinforce the use of the Professional Learning Standards.

Goal 3: Design and implement high quality PD for school administrators that increases their instructional leadership skills to improve student achievement
Regional trainers included administrators in their trainings at the school sites – in fact, participation of administrators is preferred. Institutes and grants included administrators from the school teams during the summer sessions. In 2016-17, support for administrators was provided for the NEPF in the form of Student Learning Goal information and Leading for Impact: Going Deeper with the NEPF workshops, which included examination of the rubrics for both teachers and administrators, and support for observation, data collection, and conferencing with teachers.

Goal 4: Implement systems to measure impact of RPDP professional development on teacher effectiveness and student learning
In addition to collecting multi-year systematic data on the scope, type, participation, and feedback from NWRPDP professional development trainings, a case study evaluative approach is employed to assess the diversity and wide-ranging impact of various training topics. These

mixed method strategies are advocated by Killion (2002), and are consistent with the educator PD evaluation frameworks of Guskey (2002) and Desimone (2009). NWRPDP staff actively design and implement each evaluative case study that seeks to illustrate changes in teacher practice and student learning as a result of the diverse PD activities employed over the past year.

Needs Assessment
The assessment of training needs of teachers and administrators is determined through a combination of planning tools and strategies, including but not limited to the following:
- Collaborative meetings with superintendents or key district personnel to identify priorities and needs on an annual basis guided by the District Performance Plan (DPP).
- Request for services from district personnel or principals based on their School Performance Plan (SPP) and needs of teachers on staff.
- Collaborative planning meetings with principals and leadership teams to determine goals and objectives for designing a professional development plan.
- Collaborative work with Nevada Department of Education on Initiatives to design and implement roll out plans for the NVACS as well as other state initiatives.

Regional Structure Effectiveness
The structure of the region remained consistent during the 2016-17 school year, with all facilitators available to bring expertise to all districts in the region.

Services provided to each county in relationship to the number of schools in that county were reported as follows: Washoe County, which has 66% of the schools in the region, received approximately 47% of services; Carson City with 7% of the schools received about 28% of services; Churchill County with 3.9% of the schools received around 39%; Douglas County with 9% of the schools received approximately 21% of services; Lyon County with 11% of the schools received about 18% of the services; and, Storey County with 2.6% of the schools received around 15% of the services provided by facilitators in the region. The balance of the trainers' time, approximately 10%, was allocated to State and regional projects as well as collaborations with other state agencies.

Staffing Patterns and Roles
There were no major staff changes during the 2016-17 school year. Content area facilitators continued to serve the region in the areas of math, literacy, science, STEM, social studies, English language learners, PreK-third grade, and teacher leadership. A difficult to fill secondary math position was reconfigured to add a disciplinary literacy facilitator with positive results for support. Outside help was contracted to support administrator professional learning as there was no full-time administrator learning facilitator on staff.

Program evaluation continues to focus on the reflective inquiry cycle to support quality professional learning throughout the region. Staff provide input to the process through case studies, data collection, and data interpretation. Program evaluation is accomplished with support from an external evaluator to help with case study planning and data collection, and to allow outside eyes to critique and clarify the yearly evaluation report.

Learning facilitators bring experience in all content areas at both elementary and secondary levels. Additional areas of expertise, beyond implementation of standards-based instruction focused on the NVACS, include elementary and secondary literacy and Nevada Early Learning Intervention Program (NELIP); pedagogy; Sheltered Instruction; Student Learning Objectives and Goals; Science, Technology, Engineering, and Mathematics (STEM); Nevada Educator Performance Framework (NEPF); and parent involvement/family engagement, among others. Learning facilitators update their knowledge and skills through attendance at national, regional, state, and local conferences and workshops. Facilitators also hone their skills by presenting at some of these venues to gain feedback, cutting edge information, and experience. Staff biographies are available on the NWRPDP website located at www.nwrpdp.com. Figure 3 represents the organization of the NWRPDP for the 2016-17 school year. Table 2 lists current staff members, their titles, and areas of expertise.

Figure 3. NWRPDP Organizational Chart – SY 2016-17
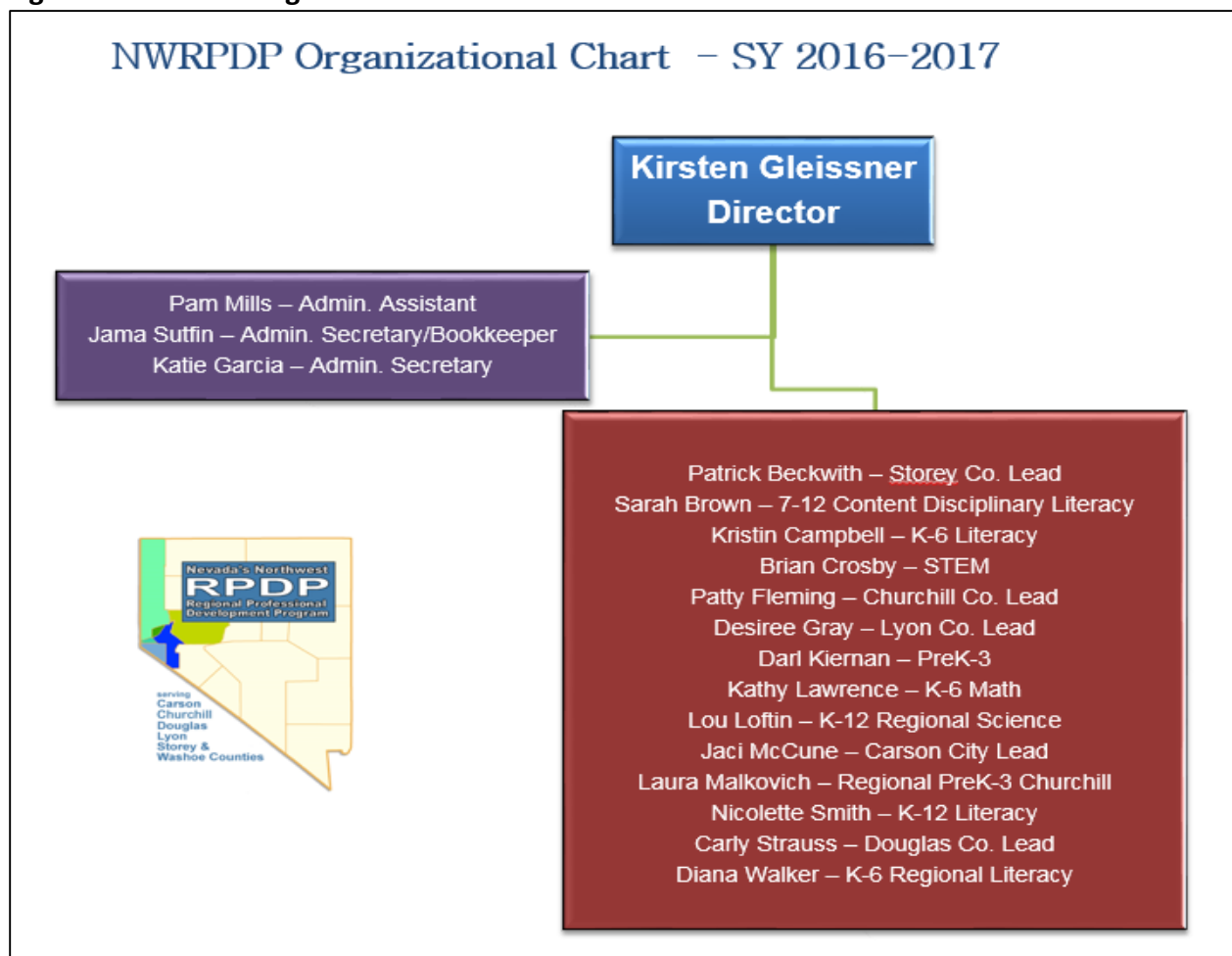
Table 2: NWRPDP Staff Members, titles, and areas of expertise for the 2016-17 school year

Name	Title	Area of Expertise
Kirsten Gleissner	Director	School performance/improvement planning; Leadership Team, Professional Learning Communities, and Data Team support; classroom observation and coaching; Administrative Mentoring; NVACS; NEPF
Patrick Beckwith	Professional Learning coordinator for Storey County	Mathematics, Assessment, Administrative Mentoring, NVACS, NEPF
Sarah Brown	7-12 Learning Facilitator for Content/Disciplinary Literacy	Social studies content and standards development, National Board Certification support, pedagogy and new teacher support, NVACS disciplinary literacy in all content area.
Kristin Campbell	K-12 Learning Facilitator	NVACS, Science and Social Studies content area literacy, Backward Lesson Design (UbD), Assessment, Student Learning Facilitator (SLF) program, T4S, Core Task Implementation Project (CTIP), Writing to Sources, Differentiated Instruction, Project-based Learning, NEPF
Brian Crosby	K-12 STEM Learning Facilitator	STEM, Inquiry, Depth of Knowledge, NVACS, Differentiated Instruction, Outdoor Education, technology integration
Patty Fleming	K – 12 Mathematics and Literacy Learning Facilitator, coordinator for Churchill County	NVACS Elementary and Intermediate Math; Sheltered Instruction, Balanced Literacy; T4S; Instructional coaching; New Teacher Induction and Mentoring; Vocabulary Instruction- *OWL: Owning Words for Literacy; W*riting Traits, Differentiating Instruction, Teaching Gifted Students in the Regular Classroom; Formative Assessment; NEPF
Desiree Gray	7-12 Literacy Learning Facilitator, coordinator for Lyon County	Content Literacy, Sheltered Instruction, Academic Vocabulary, Thinking Maps, Constructed Response, Professional Learning Communities, NVACS, NEPF
Darl Kiernan	K-6 Literacy Striving Readers Liaison	K-6 Literacy, Word Study, NVACS, Student Learning Facilitator Program, K-6 Writing
Kathy Lawrence	K-6 Mathematics Learning Facilitator	K-6 Mathematics, Coaching and feedback, collaborative learning, Backward Lesson Design, formative assessment, methods for facilitating student discussion and problem-solving in mathematics.
Lou Loftin	K-12 Science Learning Facilitator	K-12 Science Inquiry, Depth of Knowledge (DOK), NVACS, Differentiated Instruction Science and Math, Informal Science, Outdoor Science Education, Science/Math Integration, STEM

Name	Title	Area of Expertise
Laura Malkovich	PreK-3rd Grade Regional Learning Facilitator	PreK-3rd Grade Initiatives and planning, Classroom Assessment Scoring System (CLASS) observations and coaching, Early Childhood Environment Rating Scale (ECERS 3) and Early Language & Literacy Classroom Observation (ELLCO) assessments , Family Engagement, WIDA Early Years, NEPF
Jaci McCune	K-6 Mathematics Learning Facilitator, coordinator for Carson City	NVACS Elementary Math content, K-6 science support, Sheltered Instruction Observation Protocol (SIOP), T4S, Stetson Inclusion Model, Gifted and Talented, Assessment, NEPF
Nicolette Smith	K-12 Literacy and Social Studies Learning Facilitator	Differentiated Instruction, Backward Lesson Design, Content area literacy, Student Learning Facilitator (SLF) Program, Social Studies Content, NVACS, NEPF
Carly Strauss	K-8 Mathematics Learning Facilitator, coordinator for Douglas County	NVACS K-6 math content, methods for facilitating student discussion and problem-solving in mathematics, Academic Vocabulary, Assessment, Counseling, Mindset, NEPF
Diana Walker	K-12 Literacy Learning Facilitator	NVACS content area literacy, writing, Academic Vocabulary, Assessment, Differentiated Instruction, English Language Learners, NEPF
Katie Garcia	Support Staff	Administrative Secretary
Pam Mills	Support Staff	Administrative Assistant
Jama Sutfin	Support Staff	Administrative Secretary/Bookkeeper

Collaborations

Learning facilitators reported participation in projects which represented collaborations with other state agencies, most notably the Nevada Department of Education and the University of Nevada, Reno. This represented approximately 10% of the trainers' time during the 2016-17 school year.

Collaboration with the Nevada Department of Education (NDE) focused on NVACS initiatives in math, furthering the work started with representatives of the regions, districts, and state. This year, facilitators also contributed significantly to the social studies standards revisions. Additionally, NWRPDP collaborated with the Birth to Third Grade grant and research project.

Regional learning facilitators collaborated with the Northern Nevada Mathematics Council to plan the sixth annual Math Academy and to present at sessions throughout the day.

Ongoing grant collaborations included supporting the Math and Science Partnership through the University of Nevada, Reno. This grant provided training in mathematics content and pedagogy for elementary school (K-6) teachers representing all six counties served by the NWRPDP and beyond. Two learning facilitators participated in the Science, Technology, Engineering, and Mathematics (STEM) Education Coalition in collaboration with the university.

The Great Teaching and Leading Fund grant (GTLF) was awarded for the second year to the collaborative efforts of NWRPDP and Washoe County School District (the NWRPDP fiscal agent). Funds were granted in the area of NVACS Science/STEM, Teacher Leader Development, and National Board Certification support that served over 300 teachers across the region.

Regional learning facilitators participated in a variety of other collaborative projects as well. Collaboration with Student Achievement Partners provided a full-day workshop for regional teachers on math and English language arts standards. Collaboration with the Nevada State Education Association provided additional resources for the National Boards Certification Cohort. Collaborating with the International Literacy Association led to planning a second regional conference for teachers for 2017-18.

What are the nature and extent of services?

Participant Counts and Training Categorizations
Professional development services are reported in two formats: unduplicated counts which show how many teachers, administrators, and paraprofessionals were served in each county; and duplicated counts which reflect how many educators participated in trainings, many more than once. Tables 3 and 4 show these data.

Table 3: Unduplicated Number of Educators Trained by the NWRPDP

District	ES Teachers	MS Teachers	HS Teachers	Administrators	Others*	Total by District
Carson	203	70	43	23	95	434
Churchill	89	11	30	4	80	214
Douglas	154	28	35	23	13	253
Lyon	129	43	18	19	8	217
Storey	10	3	3	2	1	19
Washoe	615	105	103	16	83	922
Totals	1200	260	232	87	280	2059

Table 4: Duplicated Number of Educators Trained by the NWRPDP

District	ES Teachers	MS Teachers	HS Teachers	Administrators	Others*	Total by District
Carson	909	358	98	47	180	1592
Churchill	438	42	70	15	199	764
Douglas	341	61	56	69	32	559
Lyon	230	73	22	34	15	374
Storey	20	5	4	6	1	36
Washoe	1187	148	153	21	128	1637
Totals	3125	687	403	192	555	4962

*Others in Tables 2 and 3 included certified personnel who did not specify a grade level, substitutes, school counselors, district-level certified positions, and other participants such as parents, paraprofessionals, and community members.

A total of 2,059 educators, 43% of the approximate 4,786 educators employed in the region (as reported by each district), participated in programs provided by the NWRPDP during 2016-17 (unduplicated count). In Carson City, 21% of the teachers and administrators participated in programs, 10.4% of the teachers and administrators in Churchill County participated in programs, in Douglas County 12.3% participated, 10.5% of the certified staff in Lyon County, in Storey County 1%, and 44.8% of teachers and administrators in Washoe County were served. Many educators attended programs on more than one occasion, resulting in a total of 4,962 contacts between the NWRPDP and educators during the year (duplicated count).

Type and Focus of Services
The NWRPDP provides a wide variety of services for the six counties in the region. Figure 4 shows the breakdown of the types of services provided by regional trainers throughout the district with a significant majority of services being in the form of training and in-service classes for the 2016-17 school year.

Figure 4: Types of Services Provided by the NWRPDP
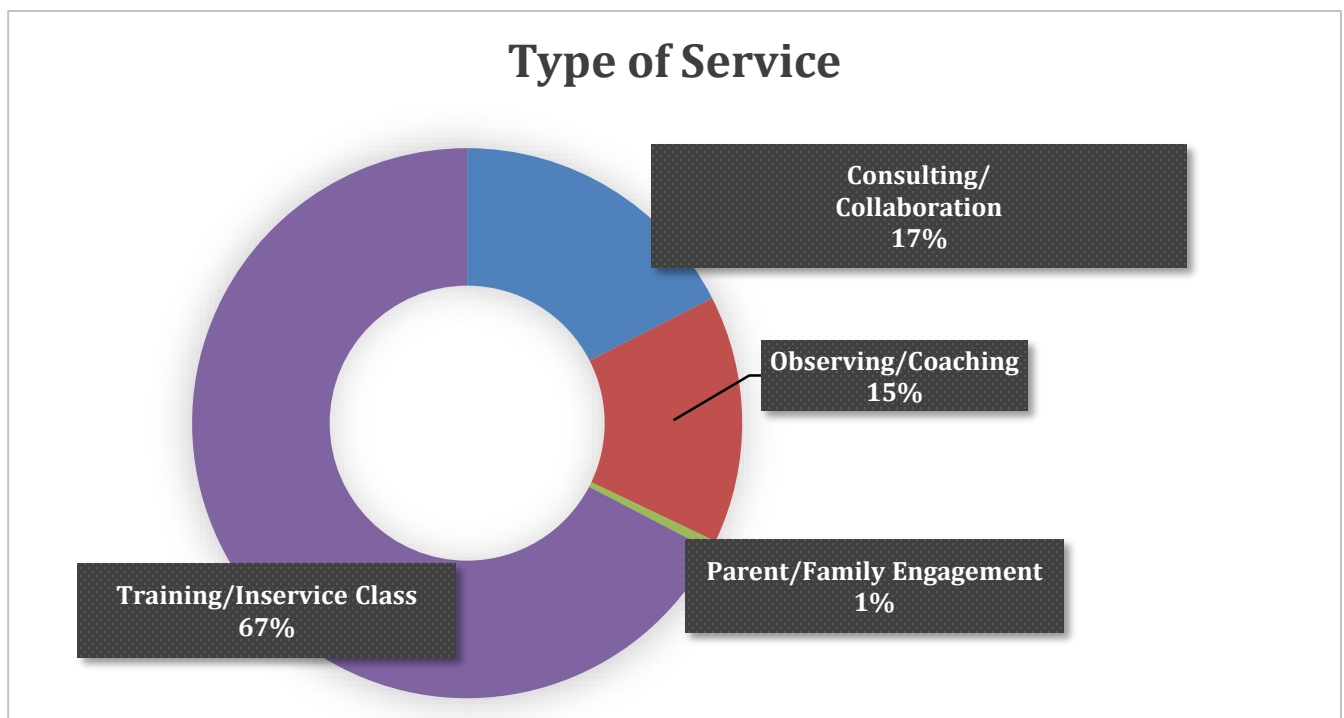
Another measure of services is the focus of the services provided. This measure looks at the content of the services offered in the region (See Figure 5). The major areas of services provided in the region for the 2016-17 school year were the ongoing focus on NVACS literacy (including writing) and math followed by training of the Nevada Educator Performace Framework (NEPF), PreK-Third Grade support, computer education and tech, and the implementation of the NVACS in science/STEM.

Figure 5: Focus of Services of the NWRPDP

Focus of Service

- Parent/Family Engagement 2%
- PreK-Third Grade 11%
- Assessment 1%
- Computer Education and Tech 8%
- Leadership 2%
- Other* 11%
- NEPF 15%
- NVACS Social Studies 3%
- NVACS Science 7%
- NVACS Literacy & English 20%
- NVACS Math 20%
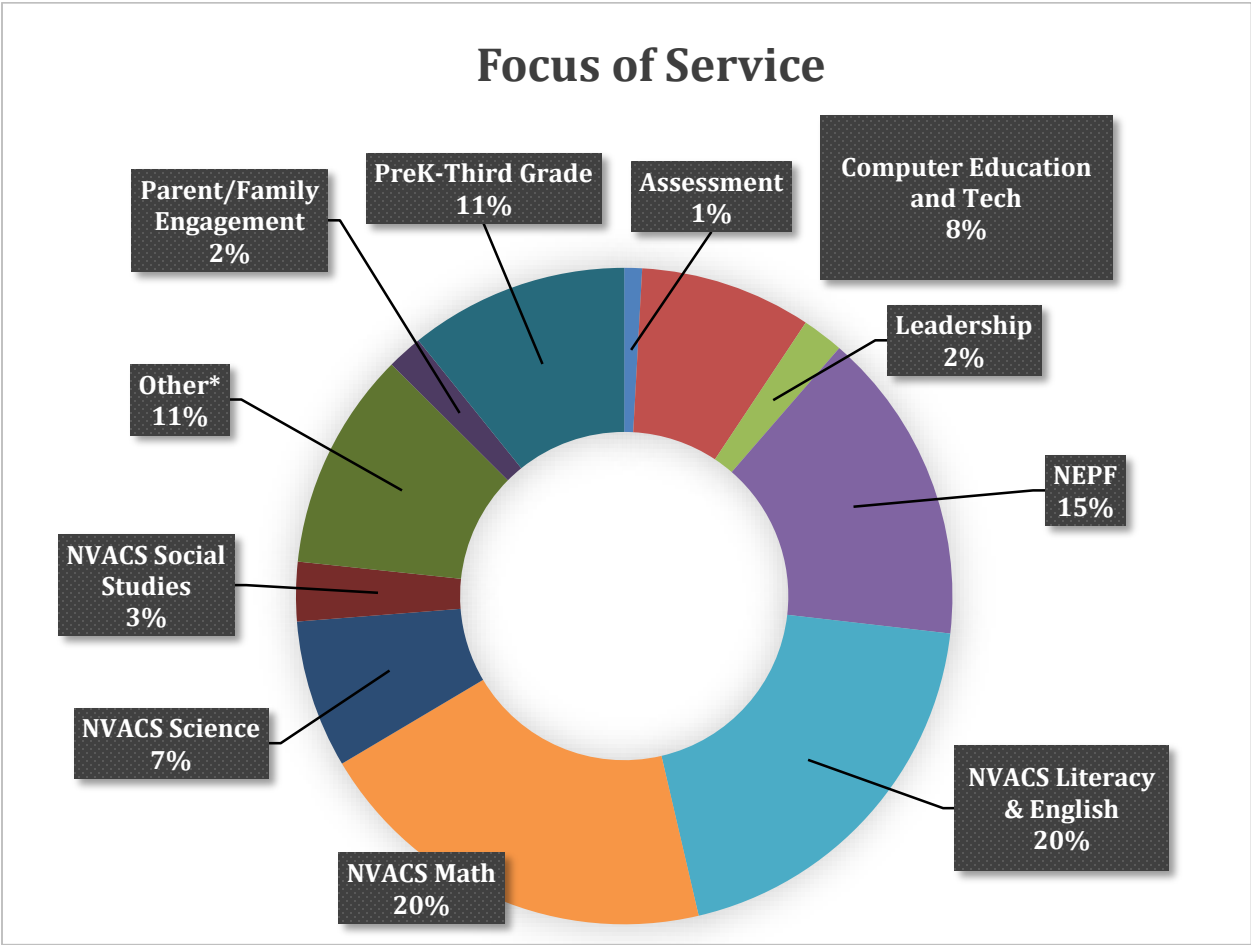
Types of Services Provided by District

There are fourteen full-time content facilitators employed by NWRPDP. Five facilitators are placed in the rural districts and nine are housed in Washoe County School District where the main NWRPDP offices are located. However, all facilitators serve and support all school districts in the region as needed and where their expertise is most beneficial.

Carson City School District has eleven schools: six elementary schools, two middle schools, one comprehensive high school, one alternative high school, and one charter school. One full-time learning facilitator is housed in Carson. Training focused mainly on Computer Education and Technology, and the Nevada Academic Content Standards in math and science.
(See Appendix F).

Churchill County School District has six schools: one Pre-K school (early learning center), one Kindergarten-first grade school, one school for grades two-three, one school for grades four-five, one middle school, and one comprehensive high school. There is also a charter school in Churchill County that accesses services. A full-time Learning Facilitator coordinates services for Churchill County. A second full-time facilitator is housed in Churchill but serves the entire region in PreK-third grade initiatives. Primary areas supported by regional learning facilitators this year were the Nevada Educator Performance Framework, the Nevada Academic Content Standards in math and literacy, followed by PreK-third grade initiatives, and other supports for English Language Learners and new teachers. (See Appendix G).

Douglas County School District has fourteen schools: seven elementary schools, three middle schools, and four high school schools. A full-time Learning Facilitator coordinates services for Douglas County. The majority of services provided this year were in support of the Nevada Academic Content Standards in math, the Nevada Educator Performance Framework, and other supports in Mindset/Social Emotional Learning, new teacher training, and formative assessment. (See Appendix H).

Lyon County School District has seventeen schools in five communities (Yerington, Dayton, Fernley, Smith Valley and Silver Springs): eight elementary schools, four intermediate schools, four high schools, one K-8 school, and one K-12 school. A full-time facilitator coordinates services for Lyon County. Services were focused this year on the Nevada Academic Content Standards (NVACS) in literacy followed by the NVACS science and the Nevada Educator Performance Framework. (See Appendix I).

Storey County School District has four schools and one part-time Learning Facilitator dedicated to organizing professional development for the district. Storey County received services in implementing the Nevada Academic Content Standards (NVACS) in science and literacy, followed by the Nevada Educator Performance Framework, and NVACS in math.
(See Appendix J).

Washoe County School District is the largest school district in the region with 102 schools: 62 elementary schools, 15 middle schools, 15 high schools, one K-12 school, one online school, and eight charter schools. Ten facilitators are housed in Washoe County District. Nevada Academic Content Standards (NVACS) in literacy (including writing) and math were the main focus of training, followed by PreK-third grade supports, NVACS social studies and science, and teacher leadership. (See Appendix K).

What is the quality of NWRPDP professional development?

Participant Rating of Quality of Training
At the conclusion of every training or project, participants are asked to evaluate the training using the form designed and implemented by the Statewide Coordinating Council (See Appendix A). The data in Table 5 reveal the average ratings for all trainings provided in the region over the past three years. In reviewing the ratings in this table, it is notable how consistent and high participant ratings have been over this past 3-year training cycle. The highest levels of satisfaction regarding trainings this past year were on items related to the expertise of the facilitators and the delivery of instruction during trainings, particularly providing opportunities for interaction and reflection. An area for examination and growth included connecting professional learning to the needs of diverse students. The data for item 6 (knowledge of standards and/or subject matter content) may be influenced by participants who failed to mark "not applicable" when trainings such as sheltered instruction or pedagogical strategies are not centered on content standards.

Table 5: Participant Mean Ratings on Quality of RPDP Trainings

Question	2014-2015 Rating	2015-2016 Rating	2016-2017 Rating
1. The activity matched my needs	4.4	4.3	4.6
2. The activity provided opportunities for interactions and reflections.	4.7	4.6	4.8
3. The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.7	4.6	4.8
4. The presenter/facilitator efficiently managed time and pacing of activities.	4.7	4.6	4.8
5. The presenter/facilitator modeled effective teaching strategies	4.6	4.5	4.7
6. This activity added to my knowledge of standards and/or subject matter content.	4.5	4.4	4.6
7. The activity will improve my teaching skills	4.4	4.3	4.6
8. I will use the knowledge and skills from this activity in my classroom or professional duties	4.5	4.5	4.7
9. This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special ed., at-risk students).	4.4	4.3	4.5
(Scale: 1 = not at all: 3 = to some extent; 5 = to a great extent)			

This past year a modification to the training form was made to assess if participants also had taken NWRPDP trainings in past years, and if so, if that previous participation had changed their teaching instruction. Results indicated that 80% of 2016-17 training participants had attended previous NWRPDP professional development activities, and these past participants indicated that their participation had markedly changed their teaching instruction as a result (4.28 mean on a 5 point scale, with 1 specifying 'Not at all' and 5 'To a great extent').

Internal Assessment for Quality Assurance

The region uses an internal program evaluation model as recommended in the *Evaluation Report: Nevada Regional Professional Development Program 2004-2005 and 2005-2006.* Positive feedback from constituents on the expansion of the case study model to include a wide variety of projects throughout the region provided direction for the NWRPDP to maintain this model. Case studies which document the breadth of training topics in the region and showcase the in-depth work of each trainer are included in this report. Projects were designed based on the backward planning model from *Assessing Impact: Evaluating Staff Development* by Killion (2002). Logic models were used to document the planning and reflect the consideration of the Learning Forward Standards for Professional Learning (See Appendix C). Procedures for assessing constituents' needs and project data collection are continually sought and refined.

Professional Learning Standards

In 2015, the Statewide Coordinating Council reconfirmed the adoption of the *Standards for Professional Learning* (Learning Forward, 2011) which serve as the basis for internal evaluation of all projects. These standards are incorporated into NWRPDP planning that help staff monitor critical aspects of their professional learning implementation. NWRPDP facilitators use the standards for self-reflection and rate themselves on each of the seven elements using a descriptive rubric (see Appendix C). The rating scale range includes 0 (not applicable), 1 (ineffective), 2 (minimally effective), 3 (effective), and 4 (highly effective). The NWRPDP staff mean ratings of standards implementation reported below reflect the application of these standards to their training activities and consultation throughout the region for the year.

LEARNING COMMUNITIES:

Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment.

Implementation rating: *3.5 Between Effective and Highly Effective*

Rationale and evidence: All participants engage in continuous improvement and follow up, take collective responsibility for the learning, and participate in creating alignment and accountability.

LEADERSHIP:

Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate, and create support systems for professional learning.

Implementation rating: *3.7 between Effective and Highly Effective*

Rationale and evidence: The project is designed to develop capacity in participants and creates support systems for on-going learning.

RESOURCES:

Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring, and coordinating resources for educator learning.

Implementation rating: *3.7 between Effective and Highly Effective*

Rationale and evidence: There is evidence of a system in place to prioritize, monitor and coordinate human, fiscal, material, technology, and time resources to support the project long term.

DATA:
Professional learning that increases educator effectiveness and results for all students uses a variety of sources and types of student, educator, and system data to plan, assess, and evaluate professional learning
Implementation rating: *3.4 Effective*
Rationale and evidence: Student, educator, and system data is analyzed initially to plan the project and at the end to evaluate the project. Ways to include student learning data are continually sought and considered.

LEARNING DESIGNS:
Professional learning that increases educator effectiveness and results for all students integrates theories, research, and models of human learning to achieve its intended outcomes.
Implementation rating: *3.9 Highly Effective*
Rationale and evidence: Learning theories, research, and models of human learning, which emphasize active engagement are used consistently by facilitators to plan and deliver the learning. Active engagement is emphasized in training.

IMPLEMENTATION:
Professional learning that increases educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long-term change.
Implementation rating: *3.5 between Effective and Highly Effective*
Rationale and evidence: Change research is consistently applied, there are follow up systems in place to sustain implementation, and constructive feedback is provided regularly to participants as they implement the program.

OUTCOMES:
Professional learning that increases educator effectiveness and results for all students aligns its outcomes with educator performances and student curriculum standards.
Implementation rating: *3.7 between Effective and Highly Effective*
Rationale and evidence: Educator performance standards are considered throughout the project and learning outcomes are aligned and build coherence throughout the school or district.

Areas of strength for implementation of the Standards for Professional Learning were reported in developing leadership and capacity in participants, providing resources, and increasing focus on outcomes for participants. All facilitators indicated that utilizing research-based learning designs was in place and consistent. An area for ongoing growth and consideration was identified as the consistent use of data for planning and assessment of student learning as related to professional learning.

Research and Development Base
Professional development (PD) based on current educational literature and aligned to the Standards for Professional Learning (see Appendix C) is the foundation of the NWRPDP's work. A list of the references cited in this report starts on page 114. Each case study provides its own list of references and resources as utilized in the case study.

How does the NWRPDP measure training effectiveness?

The Case Study Model

The NWRPDP has utilized the case study model to document its work over several years. The regional program has continued an internal evaluation model, which involves a team of facilitators and incorporates case studies from projects throughout the region to document not only the diversity and wide-ranging impact of the work, but also, in some cases, to document the long-term effects of the support provided to teachers in the region. Evaluative case studies facilitate exploration of complex phenomena within their contexts—in this case, professional development (PD) within schools and districts--using a variety of data sources. This ensures that PD is not explored through one lens, but rather a variety of lenses, which allows training effectiveness to be revealed and understood more fully (Desimone, 2009; Guskey, 2002; Killion, 2002; Yin, 2003). NWRPDP staff actively design and implement each evaluative case study that seeks to illustrate changes in teacher practice and student learning as a result of the diverse professional learning activities employed over the past year. Thus, the following 13 case studies are focused evaluation investigations that incorporate mixed-method research designs to illustrate the breadth of training, variety of topics, and depth of consultation employed by NWRPDP staff over the past year. Each also has a logic model attached that was developed to guide the evaluation of the case study and illustrates the short, medium, and long-term outcomes expected from the professional development project.

NWRPDP Case Studies

Case Study 1: Achieving Literacy across the Curriculum

Introduction/Abstract

The first and foremost objective of professional learning for teachers is to create college and career ready students who are successful thinkers, problem solvers, decision makers, and ultimately, lifelong learners. Disciplinary reading recognizes that reading, writing, thinking, reasoning, and doing within each discipline is unique and leads to the understanding that every field of study creates, communicates, and evaluates knowledge differently (Lent, 2016). In order to accomplish this goal, students need to be able to read and write effectively across content areas. Each content-area teacher is responsible for showing students how to use discipline-specific literacy tools for accessing content and incorporating reading strategies when they make sense within the context of the discipline (Lent, 2016).

The primary goal of this study was to provide teachers the opportunity to improve instruction in teaching students to read, comprehend, analyze, and interpret text across subject areas. In addition, teachers participated in professional development that required them to look at grade level literary and informational text, write text-based questions, and plan lessons that require students to use literacy strategies such as using before, during, and after reading strategies. Best teaching practices were explored and implemented to meet the needs of students with varied reading levels, cultures, and linguistic backgrounds. Teachers explored and practiced specific skills and standards directed in the Nevada Academic Content Standards (NVACS). Collaboration time emphasized content area reading and writing as well as preparation for state assessments in literacy (See Logic Model).

Instructional Context

Teachers who participated in the case study were from Carson School District, Lyon School District, and Churchill School District. Teaching experience ranged from first year teachers to veteran teachers. There were approximately ten certified teachers total who attended all of the sessions. Teachers came from a variety of grade levels, schools, and districts. There were four ELA teachers, five elementary teachers (all subjects), and one science teacher in the group. Most of the participants did not know each other.

Initial Data and Planning

The initial planning of the class came as a response to requests from previous workshop participants who came from schools with school-wide literacy goals. They took an interest/needs inventory and indicated need in several areas of content literacy such as close reading; text based questions; summarizing; and before, during, and after reading strategies; specifically to help students become proficient citing evidence from text, thinking critically, and improving overall growth in reading and responding in different content areas.

Delivery of Services

Teachers participated in a 30-hour in-service class. Areas of foci were: vocabulary strategies, nonfiction book clubs, reciprocal teaching, responding to text, differentiating literacy instruction, navigating text complexity, and listening and speaking strategies. Student writing and artifacts also were discussed and reviewed. Connections were made to the Nevada Educator Performance Framework (NEPF) and parent

engagement initiatives in the different districts. Dates of service were approximately once a month, October to May.

Results and Reflection
Data was collected in the form of survey ratings and annotations. The teacher survey results in the table below reflect pre- and post-assessment feedback about specific Nevada Academic Reading Standards. Table 1 reveals that participant knowledge and confidence significantly improved (<.001) because of the training.

Evaluation of the Effectiveness of the Training
Participants were asked to provide overall evaluation on the effectiveness of the training on a 1-5 scale (1- Not Effective, 5- Very Effective).

A. Organization and preparation   4.8
B. Style and Delivery   4.9
C. Responsiveness to Participants   5.0
D. Creating a Learning Environment   5.0
E. Content of the Trainings   5.0

Data from the overall evaluation indicate that participants viewed the course as very effective in all areas of the training.

Table 1. Pre- and Post-Assessment Feedback (Rating of 1 – 5)

Question	Knowledge Before	Knowledge After	Change	*t*-score	p value
NVACS in ELA/Reading	3.20	4.60	+1.40	8.57	< .001
Deeper Conceptual Understanding of the reading strategies inherent in the NVACS	3.00	4.60	+1.60	9.80	< .001
Ideas for student engagement with NVACS in ELA.	3.00	4.80	+1.80	9.00	< .001
Activities to support implementing curricula for NVACS in ELA.	3.10	4.90	+1.80	7.22	< .001
I feel confident in my **ability to implement** before reading strategies that help students access my content area.	3.20	4.80	+1.60	7.24	< .001
I feel confident in my **ability to implement** during reading strategies that help students access my content area.	3.20	4.80	+1.60	7.24	< .001
I feel confident in my **ability to implement** after reading strategies that help students access my content area.	3.20	4.80	+1.60	9.80	< .001

Note. *n* = 10

The greatest areas of growth were shown in participating in activities to support implementing curricula for NVACS in ELA and ideas for student engagement. Qualitative data was also collected. Comments are provided below.

Which strategy, idea, example or practice helped you increase student understanding of content area text?

- I appreciate the time allowed to actually participate in the strategies and activities so we can immediately implement in the classroom.
- I particularly liked the class that focused on metaphorical thinking.
- Wealth of short stories used to model strategies
- Examples of activities that can be used across subject areas
- Exploring and practicing multiple reading strategies that could be used immediately with students
- Guided practice using step-by-step hands-on activities to use with students
- Being able to discuss ideas, collaborate with others, and reflect on teaching practice
- Receiving resources and ideas on implementing content literacy, especially graphic organizers, flipbooks, and complex text possibilities
- Breaking things down to the basics to see how students might learn material best

The teachers also were surveyed about the effectiveness of the trainings. Participants were asked to rate each of the statements on a Likert scale of 1= Very unlikely to 5= Very likely on the following statements and questions.

1. I intend to use the information from this training now and in the future within my classroom. **4.9**
2. Do you feel this training was valuable to you? **5.0**
3. Do you feel your students enjoyed and gained quality conceptual understanding from the strategies learned? **4.8**

Responses on the survey provide evidence that the quality of the course was excellent and that teachers found the instruction and material valuable. Teachers wrote the following comments about the quality of the class:

- As always, our facilitator is a wonderful and engaging teacher. The content and classes are very informative and continue to help me build on my own content knowledge and implementation of strategies to keep my students learning.
- Our facilitator is an exceptional educator and always provides fresh ideas!! I am able to share what I learned from her with fellow teachers at my school as well as students. So, it's not just me that benefits but my whole site.

Conclusion

It is evident from the data collected that learning and practicing content area literacy strategies such as annotating text and collaborating with others had a significant impact on teacher implementation and that teachers felt that strategies supported students' ability to successfully navigate information in textbooks and literature. Participants appreciated resources and time to work with their peers. Written responses indicated that teachers intended to use the information from the trainings within their classrooms and that students gained quality conceptual understanding from the strategies

implemented. Teachers requested further training in the areas of using technology in the teaching of ELA, Creative/narrative writing, informational reading research, project-based curriculum development, and NEPF Standard 4 Metacognition.

Resources and References Used in this Case Study

Beers, K. (2003). *When kids can't read (6-12): What teachers can do*. NH: Heinemann.

Gallagher, K. (2004). *Deeper reading.* MN: Stenhouse.

Lent, R.C. (2016). *This is disciplinary literacy.* CA: Corwin.

Zwiers, J. (2011). *Academic conversations.* MN: Stenhouse.

NWRPDP Case Study 1: <u>Achieving Literacy across the Curriculum – Logic Model</u>

Situation: In-service Classes in Fallon, Dayton, and Carson City (9 meeting times)
Book study will consider literacy related reading issues, reading for purpose and with an appropriate stance, before, during, and after reading strategies, writing across the curriculum, and note taking skills.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	*Short*	*Medium*	*Long*
• Notebook with Dividers • *When Kids Can't Read* by Kylene Beers • 32 hours of instructional time	• Teachers discuss assigned text • Teachers practice 1-2 strategies/ideas and 1-2 literacy/ engagement strategies during the collaboration • Teachers brainstorm and have dialogue about implementation • Teachers may opt to work with content area to plan implementation • Teachers use content area text to develop a close reading plan • Assessment of Teacher Growth and Understanding	• Teachers from Churchill School District, Lyon County School District, and Carson School District • 5-8th grade teachers	Learning • Increased Pedagogical Knowledge Emphasizing Content Area Literacy Instruction • Increased Teacher Confidence and Efficacy Measures: • Case Study • Workshop Ratings	Action • Increased use of Content Literacy Practices • Increased Teacher Collaboration/ Development of Lessons that utilize Content Area Literacy Instruction • Phase 2 Case Study- creating instructional materials Measures: • Coaching • Case Studies	• Increased Student Achievement in Reading. • Increased Graduation rates • Increased Teacher Retention Measures: • Existing Data

Assumptions
Training will increase student achievement and be evident to the administration during the evaluation process.
Continued Funding

External Factors State, District, and School Site

- Time and student ability
- Administrator Expectations
- State, District, and Social Site Contexts

Case Study 2: Writers Workshop K-6

"Writing is a struggle against silence."
— <u>Carlos Fuentes</u>

"Writing is the thing that props me up."
— <u>Horton Foote</u>

Introduction/Abstract
Primary students must learn to correctly form letters and symbols in order to become writers. This is hard work for little hands. But even when they have learned to form the letters and symbols, they are not yet writers. There is still much hard work for their little hands to do. This is so because learning to write also requires learning to think in genre, learning to interpret both their lives and information. Writing is a skill set that essentially props up all learning. Fortunately, students are vulnerable to writing instruction. When students are afforded direct writing instruction, allowed time to practice, and are given feedback, they grow as writers, as thinkers, and as people. This case study focused on Kindergarten to sixth grade students who have been taught using the grade level *Units of Study in Opinion, Information, and Narrative Writing* by Lucy Calkins and her Teachers College colleagues. This case study also focuses on their teachers who have dedicated planning and instructional time to implementing the writers workshop model of teaching writing into their daily classroom lives. This case study is a celebration of that journey. (See Logic Model)

Instructional Context
 The focus school for this case study is a K-6 school in Washoe County. There are less than 500 students spanning kindergarten to sixth grade. The entire school adopted the Writing Units of Study as their writing curriculum. The school is Title I eligible, but does not receive Title I funding. There is one administrator and 24 Classroom teachers. The school is 56% minority and 44% white. The school has a 19.4% transiency rate. Eleven percent of students have an IEP, 19% of students are ELL, and 50% of students have free or reduced lunch. The school uses a block schedule format that includes a 90 minute literacy block. Teachers have writers workshop scheduled at least 4 days a week for 30-45 minutes. Every classroom teacher has both the grade level writing kits and at least three of the recommended mentor texts. The school report card indicates a school-wide goal to improve writing.

Initial Data and Planning
The trainer was invited in during the second half 2015-16 school year to conduct some initial training for the writing units of study. As part of that training the fourth through sixth grade teachers gave a pre on-demand writing assessment. The results indicated that most students were writing 2-3 grade levels below grade level writing according to the standards based rubric that was used to evaluate the writing. The post on-demand assessment indicated that most students' writing skills improved. At the end of the 2015-16 school year the school leadership team decided to focus on writing instruction using the *Units of Study in Opinion, Information, and Narrative Writing* school-wide for the 2016-17 school year and to use the pre and post writing assessment for informative or opinion/argument writing for the teachers' Student Learning Objectives (SLOs). SLOs are also known as Student Learning Goals (SLGs) and are part of the teacher evaluation as mandated by Nevada Revised Statute.

The plan included professional learning for teachers for the practical use of the writing units, pre and post on-demand assessments for students for all three genres: information, opinion/argument, and

narrative, and observation and feedback for both teachers and students during instructional time. The desired student outcome was an increase in writing skills as measured by the standards aligned writing rubric for the information or opinion/argument genre.

The professional learning took place over 3.5 days over the course of the school year that included the underlying architectures of the workshop model including the minilesson and conferring, managing the workshop, practical application, and tackling predictable challenges. During that time, student work and the pre and post on-demand assessments were evaluated for both student achievement and instructional follow up decisions. Each teacher received individual support through classroom modeling of the minilesson and conferring, as well as individual feedback on their teaching of the minilesson and conferencing with students. Teachers were also provided with the opportunity to focus their follow up and feedback based on their individual goals.

Teachers collected pre and post assessment information for their Student Learning Objectives for either the information or opinion/argument genre. The data collected focused on five aspects of student writing skills: lead, transitions, elaboration, craft, and conclusion. The rubric descriptors aligned with a scoring system that was then converted into an 8-point scale to meet the requirements of the SLO. Each K-6 teacher had a pre and a post writing score for each student who had been in their classroom since the beginning of the year. The on-demand assessment evaluated independent student writing against the writing standards. This was the data set used for this case study.

Delivery of Services
A total of 42 hours of professional learning was offered to the staff of which each teacher participated in 30 hours. There was differentiation for the K-2 and 3-6 grade teachers. Each teacher received at least two hours of follow up services including model lessons, observation and feedback, and lesson plan consulting.

Results and Reflection
Students were given on-demand pre and post assessments on the Information or Opinion writing genre six weeks apart. The pre and post assessment used an 8-point scale score and focused on six standards based areas of writing including: introductions and conclusions, elaboration, transitions, craft, and structure. In order to improve one point, students had to gain a half year's growth in five of six areas or gain more than a year's growth in some of the categories. Grade levels K, 1, 2, 3, and 5 focused on the Information genre. Grades 4 and 6 focused on the opinion genre. There were a total of 422 students who were given both the pre- and post-tests. There were 75 kindergartners, 67 first graders, 43 second graders, 53 third graders, 61 fourth graders, 60 fifth graders, and 63 sixth graders. Teachers used the grade level unit from The Units of Study in Opinion, Information, and Narrative writing to guide the content of instruction. The teachers used the writers workshop structure to facilitate writing instruction. For most teachers, this was the second writing unit they had taught during this school year. The rubrics were provided as part of the writing units of study kits and were used for evaluation and were Nevada Academic Content Standards/Common Core State Standards aligned.

The chart below indicates consistent average growth across K-6. The sample includes all students at the elementary school who were present for instruction from the time the pre-test was given until the post-test was given. Teachers set the goal of one point of growth on the 8-point scale. One point of growth indicates a half year of growth in grade level writing expectations as identified by the NVACS aligned rubric. Every grade level either met or exceeded the one point goal of growth for students. The average growth across grade levels ranged from a little over one point growth to almost four points of growth.

In grades K-5 a score of 1-.29 indicated below grade level, 3-4.9 indicated approaching grade level, a score of 5-6.9 indicated at grade level, and a score of 7+ indicated above grade level in writing skills. The chart reflected that the majority of students were writing well below grade level on the pretest. The post-test results indicated that the majority of students went from below grade level to approaching and, for some students, to grade level. The instruction was for six weeks in the middle of the school year. There was more time in the school year to move students toward grade level expectations. The lower horizontal or yellow lines on the graph indicate the start of approaching grade level writing skills and the upper horizontal or green lines indicate the start of grade level writing skills.

Figure 1: Student Writing Achievement
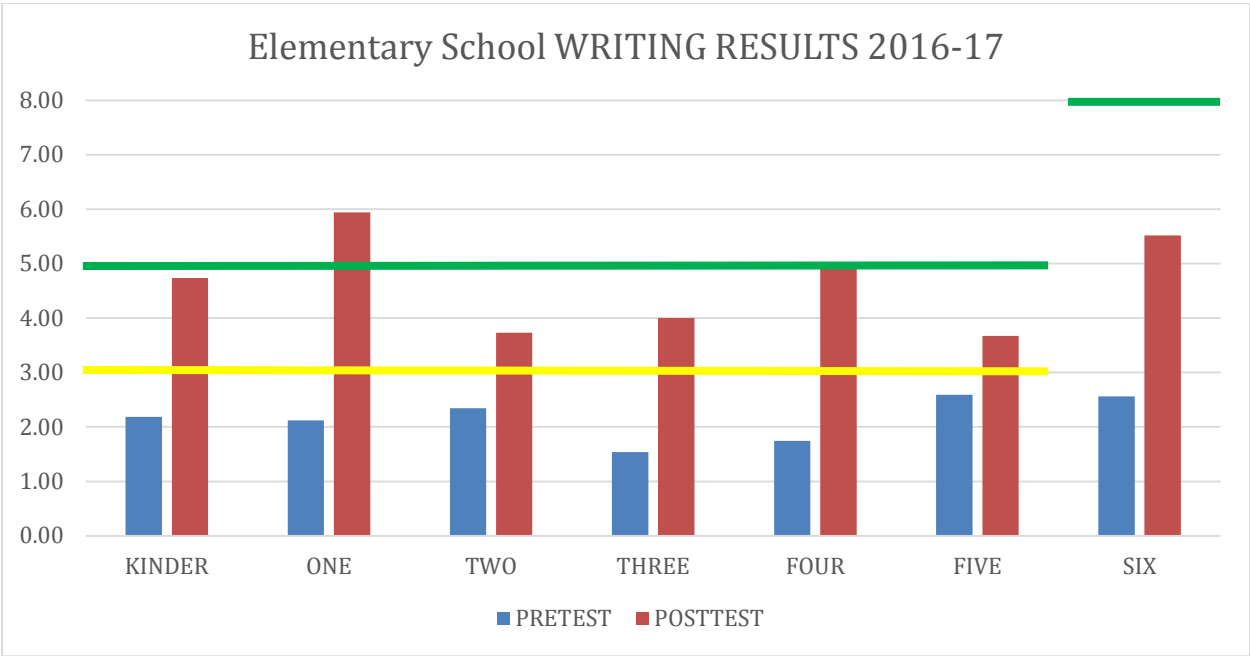
In sixth grade, the scale was different. The majority of sixth grade students were writing significantly below grade level and the sixth grade rubric aligned to the 8-point scale did not include the starting point for the majority of the students. In order to capture all of the writing skill growth in the sixth grade students, the teachers used a standards aligned rubric that spanned from third to sixth grade skills. As a result, the scores for the sixth grade indicated the following: a score of 1-5.9 indicated below grade level, 6-7.9 indicated approaching grade level, and 8+ indicated grade level. The average growth for sixth grade students was almost three points which indicated a year and a half worth of growth in writing skills. In spite of the significant growth in the students' writing skills, the sixth grade students were still writing below grade level. These results support two conclusions: first, direct writing instruction with time for student practice and targeted feedback will develop writing skills in students; second, high quality writing instruction is required over multiple years for students to meet and continue to meet grade level standards for writing. This approach was particularly effective for students who began at or below grade level.

In addition to the student growth data, there are three components of teacher reflection data based on twenty-two teacher responses. The three components include a post reflective survey about teacher

knowledge of the writers workshop structure and the level of implementation. The third component was teacher reflection on the aspects of the professional learning that they identified as effective. Figures 2 and 3 below, indicate that teachers increased their knowledge of all the components of the writers workshop model and increased their level of implementation of all the components of the model, based on the post reflective survey given to teachers at the end of the school year.

Figure 2: Teacher Knowledge of Writers Workshop

TEACHER REFLECTION: KNOWLEDGE OF WWS PRE/POST 2016-17

PRE WWS STRUCTURE	POST WWS STRUCTURE	PRE MINILESSON STRUCTURE	POST MINILESSON STRUCTURE	PRECONFERENCE STRUCTURE	POST CONFERENCE STRUCTURE
1.77	3.86	1.64	3.86	1.45	3.55
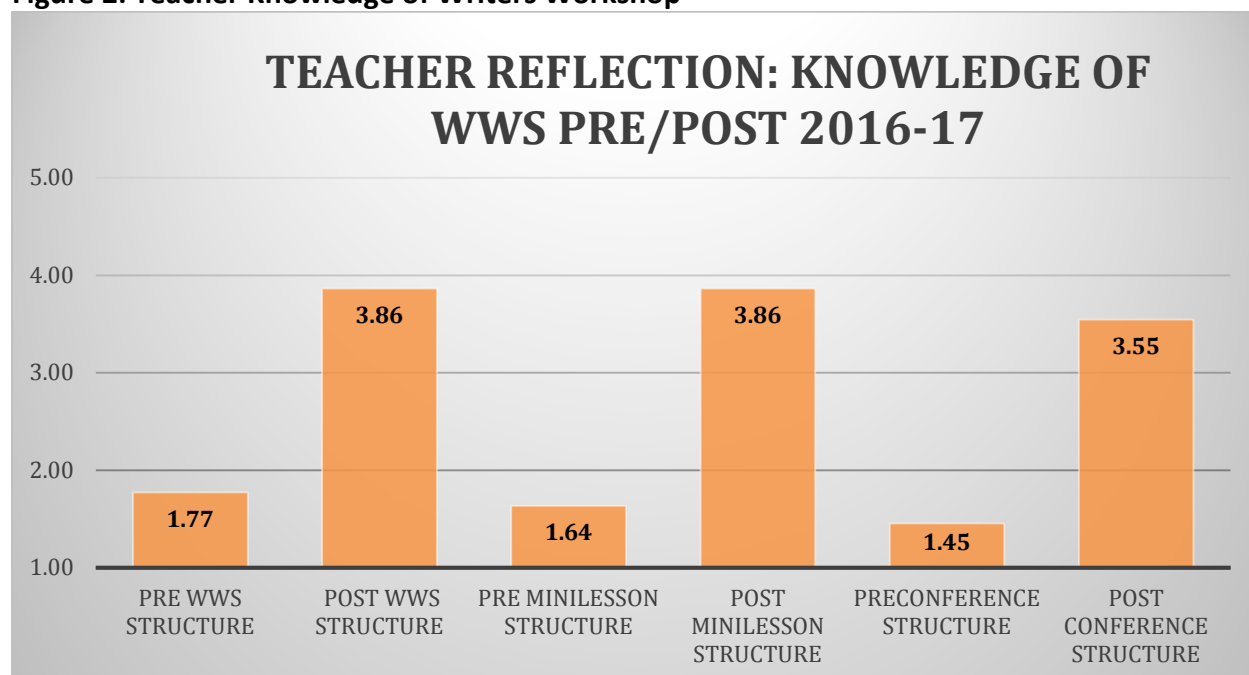
Figure 3: Teacher Implementation of Writers Workshop

TEACHER REFLECTION IMPLEMENTATION OF WWS 2016-17

PRE 3-5 DAYS A WEEK 1.73, POST 3-5 DAYS A WEEK 4.36, PRE STRUCTURE… 1.68, POST STRUCTURE… 3.95, PRE MINILESSON HAS… 1.55, POST MINILESSON HAS… 3.59, PRE CONFERRING… 1.55, POST CONFERRING… 3.41, PRE CONFERENCE HAS… 1.32, POST CONFERENCE… 3.05
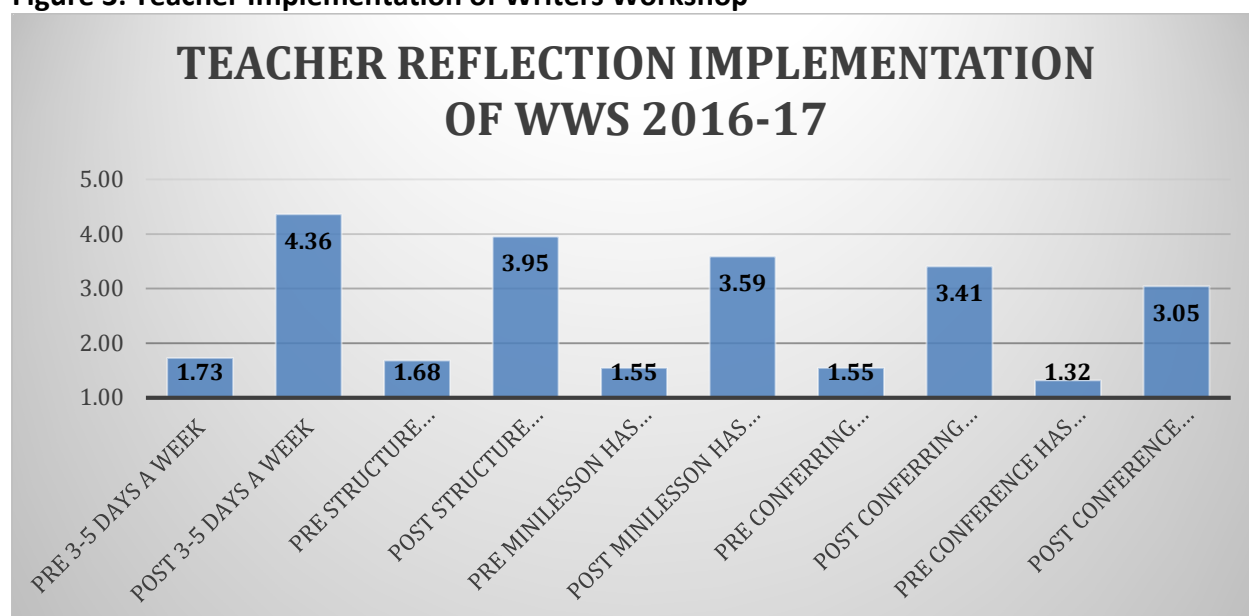
Written teacher reflection had three themes. First, teachers appreciated being able to collaborate with colleagues. Because it was implemented school-wide, teachers were able to work with their grade level peers during PLC time. They were able to support each other and problem-solve quickly. Teachers also indicated that the classroom follow up and support was helpful. Both the lesson modeling and the observation and feedback were viewed positively. The third theme was about pacing. The teachers indicated the way new information about the Workshop model was chunked out helped the implementation process to be less overwhelming. They also felt as though there wasn't pressure to be perfect in implementation. One teacher's reflection summed this up well, "The training was very useful in actual teaching - Can be implemented immediately; it contributed to student learning, and provided support for instruction."

As a whole, the professional learning was successful for both students and teachers. The school has committed to continue using the writing units of study and to continue and further focus their work next year.

Quotes from Participants

From the question: What worked/was positive in the professional learning and follow up support for the Writing Units of Study?

I really learned a lot when you came in and taught a lesson. I would like you to do that again.

When Diana came in and modeled and then conferenced with me – that was helpful. PLC time helped as well.

Seeing Diana model a mini-lesson and discussing problems/concerns individually with her.

Talking with other grade levels, talking about what will come next, and what kinds of writers will be coming into our classes the next year.

I loved how each PL day broke down a specific part of writing workshop. It wasn't all jammed into one session.

Thank you so much for your help and support this year! I appreciated your non-judgmental attitude to ensure that we all felt safe confiding in you and discussing our needs and areas of improvement. I also appreciated your realistic views of what a real classroom looks like and imperfection is ok.

I liked coming together with my grade level and the other grade levels to discuss what was working or not working in the classroom. Also to be able to bounce off a peer when I wondered where I should score student writing.

The training was very useful in actual teaching – can be implemented immediately, it contributed to student learning, and provided support for instruction.

All of the support was positive. I definitely feel more comfortable teaching writing and the different genres.

Working together with primary and our grade level. Having Diana in our classrooms to model, observe, and discuss afterward.

Taking it step by step – no pressure to be perfect

Hearing colleagues experiences: what worked and what didn't work

Conclusion

The writing pre/post test results indicated that the majority of students increased their skills in writing. Teacher reflections indicated both that they increased their knowledge about the workshop model and increased the level of implementation in their classrooms. It was the teachers' written reflection themes that provided insight into considerations for professional learning. The opportunity to collaborate with peers, to have individual classroom follow up, and to pace the learning out over time

with opportunities for teachers to practice in a safe environment are essential to professional learning opportunities.

Resources and References Used in this Case Study

Calkins, L. et al, (2014).The Units of Study for Writing in Opinion, Information, and Narrative Writing, Heinemann, Portsmouth, NH.

Anderson, Carl. (2000). how's it going? A practical guide to conferring with student writers. Heinemann, Portsmouth, NH.

Cruz, Colleen. (2015). The Unstoppable Writing Teacher. Heinemann, Portsmouth, NH.

NWRPDP Case Study 2: <u>Writers Workshop – Logic Model</u>

Situation: A K-6 elementary school principal decided to focus on writing professional learning for her staff. The Writer's Workshop Model using the Lucy Calkins resources were decided on by the teachers to be used as central resources (but not limited to these). The school-wide focus on writing instruction also includes 3 pre and post writing assessments for each genre. The focus of this case study is the information genre.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
Substitute Teachers Facilitator/Coach Writer's Workshop (WS) Resources (Units of Study, How's it Going?, One to One) School Site for training	Writers' Workshop Training from September to March 4 half days, Thursdays once a month for 30 minutes -Structure -Mini-lesson -Conferencing -Small Group Instruction Observation/Feedback 3Xs WW time is scheduled 3-5 times a week.	K-6th Grade teachers	<u>Increased Direct Writing Instruction</u> WW time is taught 3-5 times a week <u>Increased use of Resources</u> WS structure is used as a guideline to structure writing time Mini-lessons begin each WS time Teachers confer with students Teachers work with small group based on predictable problems Observation/Feedback is scheduled at least 2X's per teacher between PD sessions **<u>Measures:</u>** Teacher Needs Survey Observation/Coaching	<u>Documented Increase in:</u> WS time is maintained 3-5X's per week WS structure is fully used Mini-lessons are 10-12 minutes consistently. Mini-lessons include all parts. Conferring architecture is used consistently in conferences All students participate in conferences Teachers work with small groups based on student writing needs Observation/Feedback indicates teacher practice includes WS strategies <u>Increased positive attitude for PL</u> Observation/Feedback is positively viewed by teachers **<u>Measures:</u>** Student writing pre/post tests Observation/Coaching	Increased student writing skills that can be applied in multiple contexts for multiple audiences Increased student achievement in writing Increased graduation rates **<u>Measures:</u>** Student writing Smarter Balance MAP

Assumptions: Direct instruction in writing will result in student writers having more writing skill. Teachers will incorporate writing instruction into their instructional day effectively with professional learning, practice and support.

External Factors – multiple district initiatives including SLO's. Low district reading and writing scores.

Case Study 3: Embracing Writing Instruction in the Primary Grades

Introduction

According to the Standards for Professional Learning (Learning Forward, 2011), committed educators understand that they must engage in continuous improvement to know enough and be skilled enough to meet the learning needs of all students. The Early Literacy Cadre model builds on this continuous improvement model of professional learning by offering a five-year opportunity for teachers to refine their practice in early literacy instruction. This case study highlights the learning of participants in Early Literacy Cadre year two. Teachers in this course are required to have completed 30 hours of prerequisite learning focused on Nevada Academic Content Standards in English Language Arts. Fourteen primary grade teachers across eight school sites in Washoe County chose to deepen their knowledge and expand their portfolio of skills this school year by enrolling in year two of Early Literacy Cadre. In August, the trainer conducted a needs assessment which revealed a shared goal of improving writing instruction. Teachers overwhelmingly reported a lack of knowledge and resources to implement the Nevada Academic Content Standards (NVACS) in Writing. (See Logic Model)

Instructional Context

Early Literacy Cadre II is a two credit Nevada Department of Education approved course that meets monthly after school for three hours. It is offered to teachers in grades K-3 across the Washoe County School District which serves nearly 64,000 students. Participants enrolled in this year's cohort have a range of experience from two years to eighteen years in the profession with the majority having taught more than five years (See Table 1).

Table 1: Participants by Grade Level

Grade Level	Number of Teachers
Kindergarten	6
1st	6
2nd	1
3rd	1

Initial Data and Planning

Teachers rarely have an opportunity to identify an area of need and come together to examine quality materials to support their students. With the trainer, Cadre II participants examined sets of research-based materials that had been approved through the district's vendor review process. The group determined that *Being a Writer* offered the best support for writers in the early grades. This program is recognized by The National Writing Project because it marries a writing process approach with guided instruction, providing a clear scope and sequence to assist students in learning important elements of writing at their grade level. Lessons also specifically address the NVACS. Not only does the curriculum emphasize the development of students as writers, it also embeds social-emotional learning into the lessons. This dual focus is based on two beliefs: that students' academic learning flourishes when social learning is integrated into the curriculum and that we are called on as educators to help students develop as whole people-academically and socially. Funding provided by the Northwest Regional Professional Development Program allowed for each teacher to receive a grade level kit that included read aloud mentor texts, teacher manuals, an assessment resource book, and a skill practice teaching guide.

Delivery of Services

Kits arrived in November and the main objective for this first learning session was to understand the foundational model of the 6+1 trait model of instruction and assessment in order to begin planning for the first unit of instruction. We also established a model of sustained silent writing time for our group to ground us in the expectation that teachers of writing must be engaged in the practice of writing themselves.

At the December session, the group reflected on their implementation of Unit 1, *Establishing the Writing Community* by identifying successes, challenges, and questions. Comments were overwhelmingly positive. Content for this session centered on learning more about the stages of early writing development. Teachers brought samples of student journals and analyzed writing samples using the "Individual Writing Assessment" rubric. In order to further support teachers, the trainer invited an Elementary Coach from the department of English Learners and the Director of the Northern Nevada Writing Project to the session. Their expertise was invaluable in helping teachers assess the writing samples and plan next steps for instruction.

In February, the Director of Professional Development for the Center for the Collaborative Classroom facilitated a full day of training centered on building knowledge of writing pedagogy and the program's scope and sequence. Demonstration lessons were held in Kindergarten and third grade. The group appreciated this opportunity to see lessons modeled and debrief with the trainer.

Later in the month, a follow-up Cadre session allowed for teachers to learn about the purpose of conferring with students and tips for managing conferences. Teachers also had an opportunity to set up an online account on the Collaborative Classroom Learning Hub to utilize digital materials and resources. When Cadre met in March, teachers were asked to respond to the following writing prompt: Describe one thing you have implemented in your instructions from our last session. Five teachers reported they had implemented writing conferences and were pleased with the streamlining of this process. Two participants had started using the Learning Hub. It was encouraging that teachers were conferring with students. Given this enthusiasm, the trainer provided time at the April session for the group to view and discuss video clips of model teacher/student conferences.

Results and Reflection

Early in May, eleven of the teachers completed a retrospective survey using a Likert scale rating of 1 to 5 on several indicators of their implementation of writing instruction with 1 being "not at all," 3 being "somewhat," and 5 "very well." Group scores for each indicator were averaged for pre- and post-implementation with the gain shown in the third column. Results shown in Table 2 indicate significant gains on all items relating to the group's overall implementation of the writers workshop.

Table 2: Retrospective Survey Results

Statement	How well had you implemented **before** participating in Cadre?	How well would you say you are implementing each of the following **now**?	Change	*t*-score	*p* value	If your implementation has changed, to what extent has your participation in Cadre contributed to any change?
The development of a writing community	1.55	3.82	2.27	8.33	< .001	4.73
Sustained Silent Writing Time	1.91	3.64	1.73	7.29	< .001	4.80
Using cooperative structures to increase students' engagement and accountability for participation	2.27	3.82	1.55	9.82	< .001	4.73
Conferring with students	1.73	3.27	1.55	9.82	< .001	4.73
Teaching conventions of grammar usage and punctuation through the Writers' Workshop	2.82	3.91	1.09	3.83	< .01	4.67
Using read alouds as mentor texts for student writing	3.00	4.64	1.64	3.46	< .01	4.70
Differentiation in the Writers Workshop for English Learners	2.27	3.64	1.36	5.59	< .001	4.36
Creating opportunities for students to share their writing	2.64	4.00	1.36	4.89	< .01	4.55
Assessment of writing for primary grades	2.64	3.73	1.09	5.16	< .001	4.40
Being a writer yourself	2.09	3.55	1.45	7.02	< .001	4.55

Note. *n* = 11

Teachers also were asked to reflect in writing on their implementation of the materials. Bulleted below are some of the comments gathered in response to the following question: What were your greatest successes in your implementation of Being a Writer this year?

- My kids absolutely love writing now. I think so much of their love comes from *Being a Writer*. I love having a guide to tell me what writing to teach throughout the year.
- Actually teaching writing! – Students are happy to write.
- I really felt I created a writing community. I did much more shared & interactive writing. I also liked the mentor texts. I think they helped students see the purpose for writing.
- My students look forward to writing every day, and truly write for the entire time allotted. My lowest learners are finding success with this program.
- Students are excited about writing (cheer when I say journal time). Struggling students are taking more time and "risks". Also their confidence is increasing; more writing is happening.
- The kids are writing so much more than previous first graders that I've had, plus they are excited to write.

Teachers also reflected about their challenges with implementation. The most noted challenge was finding adequate time to implement the program along with other curricular demands. Despite the challenge of "trying to fit it all in," the remarks above reflect the positive results of using these materials and attending regular facilitated professional learning sessions.

At the end of May, teachers across five Cadres gathered to share their learning around the following essential question: How has your experience in Cadre impacted your teaching and the learning of your students? During this final Cadre celebration, a Kindergarten teacher from a Title 1 school opened her presentation with these words: "It's not whether they can write, it's now higher expectations." The following NVACS in Kindergarten have raised the bar for student outcomes in writing:

- Use a combination of drawing, writing, dictating and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
- Capitalize the first word in a sentence and the pronoun I
- Write a letter or letters for most consonant and short vowel sounds
- Spell simple words phonetically

She then shared the representative writing sample below (Figure 1) to illustrate how her own professional learning journey has impacted the achievement of her students. Although the teacher supplied a topic sentence, it is evident from this draft that students are moving towards the expectations of the standards.

Figure 1. Kindergarten End-of-Year Writing p. 1-6
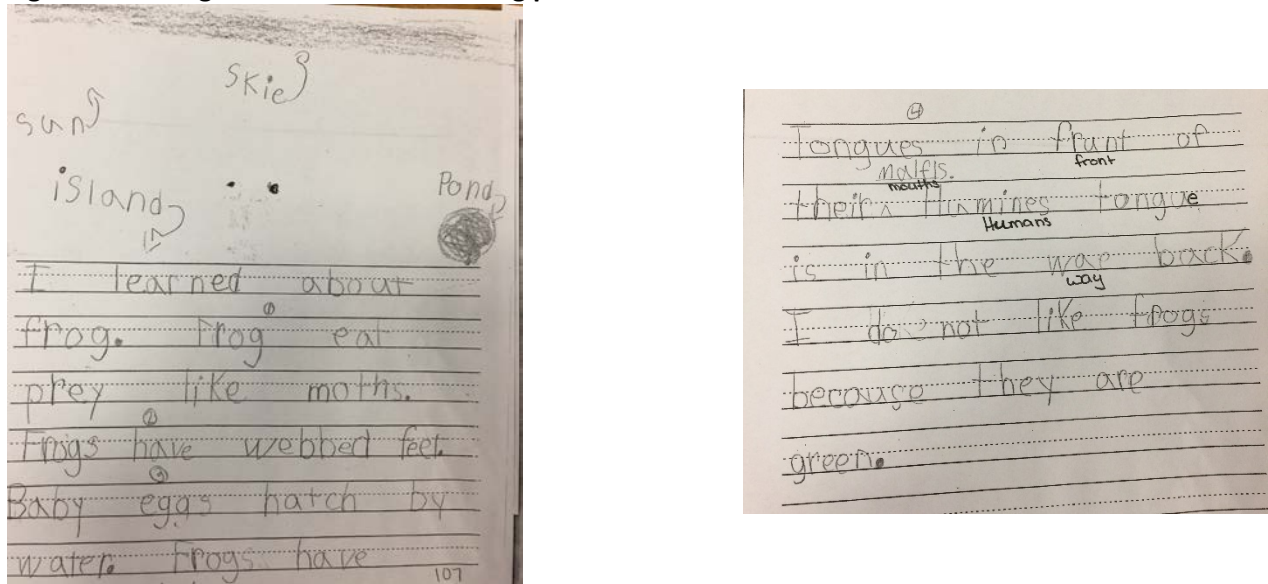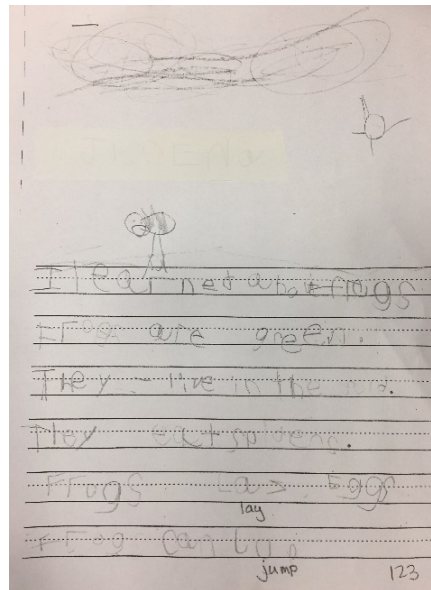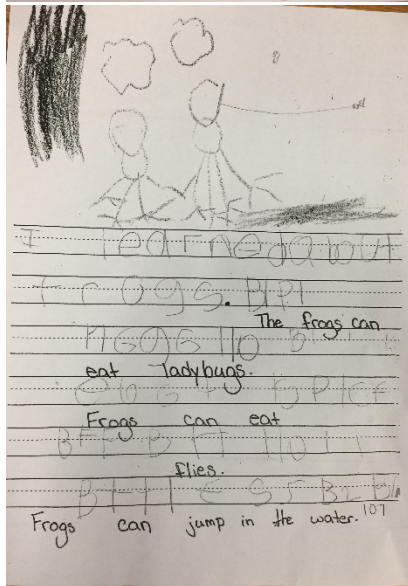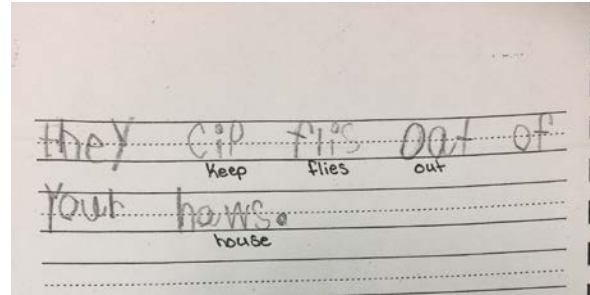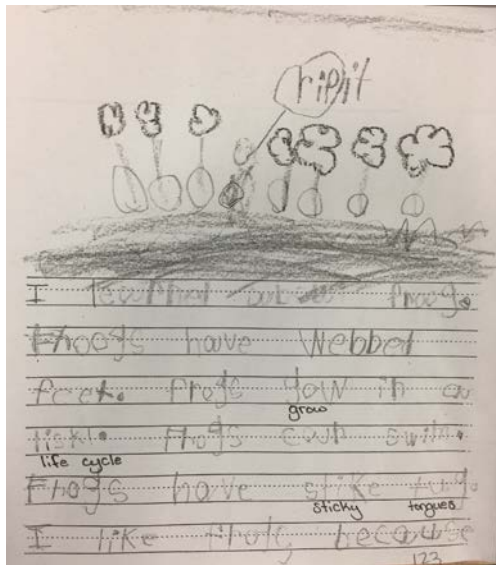
Another noteworthy celebration for two teachers was the recognition of students from their classrooms by the KNPB KIDS Writers Contest. Each year, the contest involves hundreds of children in grades K-3 across Northern Nevada. A Kindergartener and a 2nd grader who participated in *Being a Writer* this year received third place at their grade level. Their final drafts will be available this summer for public view at the Reno-Tahoe International Airport.

Conclusion

Writing instruction should begin in the earliest grades and requires frequent, supportive practice (Nagin, 2012). *Being a Writer* provided a flexible writing curriculum for Cadre teachers based on the writers workshop model. It allowed teachers to build a community of writers steeped in rich literature and high-quality trade books and sparked both social and writing development. Due to the successful implementation of teachers in Cadre, five elementary sites plan to expand the use of *Being a Writer* school wide. Implementation will be supported over the next two years through a network of collaborators including representatives from the district's Curriculum and Instruction Department and the Department of English Language Learners. Representatives from WestEd and trainers from the

Center for the Collaborative Classroom will partner with the district to provide training and ongoing support for administrators and staff at these school sites. In addition, facilitators from NWRPDP will continue to meet and plan with this team to assist in this capacity building effort focused on improving student writing.

Resources Used in this Case Study

Center for the Collaborative Classroom (2017). https://www.collaborativeclassroom.org/
    Learning Forward. (2011). *Standards for professional learning.* Learning Forward. Retrieved from *https://learningforward.org/standards-for-professional-learning.*

Nagin, C. (2012). *Because writing matters: Improving student writing in our schools.* John Wiley & Sons.
    National Writing Project (2017). https://www.nwp.org/

NWRPDP Case Study 3: <u>Embracing Writing Instruction in the Primary Grades - Logic Model</u>

Situation: A need assessment was conducted with K-3 teachers enrolled in Early Literacy Cadre II. Nearly all participants indicated a need for support in the area of writing.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
Budget

Resources- Being a Writer Kit for each teacher

Monthly facilitated meetings

Garner support from coordinators in the Curriculum & Instruction department:

Kacey Edgington-Kindergarten Coordinator

Kim Cuevas
7-12 ELA Coordinator Northern Nevada Writing Project Director | Determine scope and sequence of professional learning

Summarize content from professional learning each session by blogging. Email the blog link to site level administrators and C&I stakeholders. | Encourage Cadre II teachers to attend each class for a full 2 credits in order to build knowledge, reflect, and plan

Ask teachers to bring Teachers Manuals and trade books for upcoming units to each Cadre session

Teachers rate themselves on objectives for each session on a scale of 1 to 10

Teachers respond to the following writing prompts each session:

This is something new I learned or expanded my learning about.

This is how I plan to apply this new learning in my classroom. | Increased knowledge of the 6+1 trait model of instruction and assessment

Teachers can plan for a month of instruction with the aim of establishing a writing community in their classrooms.

Increased understanding of the dual focus of academic and social learning needed to establish a writing community

Measures:
Teacher reflection | Teachers implement Unit 1 of Being a Writer in which they have established the social and academic climate for building a writing community

Students increase their stamina for sustained writing and are approaching writing with confidence and enthusiasm

Measures:
Teacher reflection
Student writing samples
Class Assessment Records | Increased understanding of the writing process and workshop model of instruction

Students are progressing along the early writing developmental continuum.

Teachers implement Units 2 and 3 or Being a Writer

Measures:
Teacher Reflection
Student writing samples
Individual Assessed writing |

Assumptions
This project requires a full year commitment to professional learning which includes attending monthly facilitated meeting, implementation of the program, self-reflection, and collection of student samples of learning.

External Factors
Teachers did not receive materials until November; implementation began late. Individual teacher coaching is not being offered in the fall that would assist in supporting teachers with implementation of the writing workshop.

Case Study 4: Hands-on Learning in Earth/Space Science

Introduction/Abstract

The focus of introducing and training on the Nevada Academic Content Standards for Science (NVACSS) are of great importance for Nevada teachers. The updated standards were based on the Next Generation Science Standards (NGSS) which the State of Nevada adopted in May 2014. During the 2015-16 school year, teachers across the regions participated in a questionnaire regarding understanding of the new standards. All of the teachers questioned understood very little about how to interpret the new standards. Based on this response, Nevada's Northwest Regional Professional Development Program (NWRPDP) PreK-12 Science trainer worked together with regional staff to research, author, and submit a second Great Teaching and Leading Fund (GTLF) grant proposal for K-8 teachers in the Northwest Region of Nevada. With the grant's acceptance, in August 2016, the facilitator worked to design, prepare, and implement grade level specific trainings for two cohorts. Each of the two cohorts, of nine grade level specific groups, received three full days of instruction on the NVASS in Earth/Space science.

The goal of the trainings was to provide teachers the training and support required to engage students in quality science instruction that incorporated the NVACSS based on the NGSS. Teachers gained an understanding of what science education is and how they could utilize it in their classrooms. (See Logic Model)

Instructional Context

NWRPDP serves six Northwestern Nevada counties: Carson, Churchill, Douglas, Lyon, Storey, and Washoe. NWRPDP provides support with implementing the NVACSS for teachers in the Northwest region of Nevada. Based on information from district personnel, teachers in this region lacked the training, materials, and expertise to implement the NVACSS without intervention from specialists. The participants from each county served were: 12 Carson, 9 Churchill, 26 Lyon, 10 Storey, 181 Washoe (total participants 238). Of the participants, 176 were K - 5 teachers and 62 were middle school teachers. Experience level of teacher participants ranged from first year novices to more than 20 year veterans. The Nevada State Legislature mandated, by its adoption of the NVACSS in 2014 and by Nevada law requiring adopted standards to be implemented in schools within two years, that teachers receive the professional development necessary to implement the standards in their classrooms. Funding of state grants such as the GTLF grant are intended to help meet this mandate.

Initial Data and Planning

At the conclusion of the 2015-16 trainings, participants where asked if they would like further training on the NVACSS in the content area of Earth/Space Science. Almost all of the participants indicated that they would be very interested in additional training the following year in the NVACSS Earth/Space content area. From this information, the NWRPDP K-12 Science trainer submitted the new GTLF grant for training 288 teachers in the NVACCS Earth/Space disciplinary core area for the 2016 – 17 school year. Actual numbers of participants that completed the trainings were 99 in cohort 1 and 139 in cohort 2 (238 total). Cohort 1 consisted of 13 Kindergarten teachers, 0 first grade teachers, 13 second grade teachers, 17 third grade teachers, 17 fourth grade teachers, 5 fifth grade teachers, 9 sixth grade teachers, 14 seventh grade teachers, and 11 eighth grade teachers. Cohort 2 consisted of 14 Kindergarten teachers, 36 first grade teachers, 11 second grade teachers, 23 third grade teachers, 17 fourth grade teachers, 9 fifth grade teachers, 14 sixth grade teachers, 8 seventh grade teachers and 7

eighth grade teachers. The 3 all-day trainings for cohort 1 took place during September 2016 through December 2016. Cohort 2 trainings took place during January 2017 through May 2017.

Each grade level received instruction that consisted of training for the implementation of the NVACSS/NGSS in the domain of Earth/Space Science for their specific grade level. Training included a history of how the NVACSS were developed through a basic understanding of how they are intended to be implemented in the classroom. The three dimensions of the standards were also highlighted: Science and Engineering Practices, Cross Cutting Concepts, and Disciplinary Core Ideas.

Participant teachers received access to resources such as science equipment and an online component that included curriculum aligned to the standards, notebooking, assessments, video collections, fiction and nonfiction literature, and other English language arts supports.

Delivery of Services

During the workshops, teachers were guided through the format and background of A Framework for K-12 Science Education and the NVACSS based on the NGSS. Teachers participated in discussion to deepen understanding and explored hands-on activities by using materials designated for their grade level. Teachers also observed videos and explored fiction and non-fiction literature related to Earth/Space science. Through grant funding, some teachers also participated in the National Science Teachers Association National Conference and shared learning with colleagues at their sites.

Results and Reflection

Teachers were administered a post-reflective survey to measure learning and usage. There were 196 responses. The results of the survey are displayed below. First, teachers were asked to rate their experience on a scale of 1 to 5 in terms of organization and preparation, style and delivery, responsiveness to participants, creating a learning environment, and content of the training. All responses were between a mean rating of 4.76 and 4.88.

- Organization and preparation = 4.81 (mean)
- Style and delivery = 4.76
- Responsiveness to participate = 4.86
- Creating a learning environment = 4.88
- Content of the training = 4.86

Teachers also were asked to rate their learning in a variety of areas before the training and after the training. These areas included understanding of standards, structuring of activities to engage students, ideas for parent and family engagement, ideas for engaging students, science activity development, positive discipline, and teaching strategies. *T-test* statistics revealed significant positive gains (<.001) in all areas (see Table 1).

Table 1. Post-reflective Survey Results (Rating scale of 1 to 5 where 1 is Poor and 5 is Excellent)

	Mean before	Mean after	Change	*t*-score	*p* value
NVACSS in Earth/Space science	2.55	4.30	+1.78	29.396	< .001
How to structure activities/pedagogy and engage students with the NVACSS in Earth/Space science	2.51	4.46	+1.95	27.106	< .001
Ideas for parent and family engagement in curriculum and teaching practice that involves the NVACSS in Earth/Space science	2.29	4.05	+1.76	23.309	< .001
Ideas for student engagement with the NVACSS Earth/Space	2.53	4.55	+2.02	29.799	< .001
Activities to implement in support of curricula for NVACSS Earth/Space science	2.36	4.61	+2.25	32.728	< .001
Positive guidance and discipline techniques in the classroom	3.34	4.49	+1.15	15.221	< .001
Teaching strategies that are aligned to and assess the NVACSS Earth/Space	2.61	4.53	+1.92	25.226	< .001

Note. All pre to post evaluation questions (above table) revealed positive gains and were significant at the *p* < .001 level. *n* = 196

Finally, teachers rated how likely they were to use the information gained during the year in their classrooms, value of the training, and student enjoyment. Mean ratings on a 1 to 5 scale fell between 4.90 and 4.93, with the highest rating indicating future use. Additionally, 98.98 percent of teachers indicated interest in continuing professional development in science.

- I intend to use the information from this training in the future within my classroom = **4.93**
- Do you feel this training was valuable for you? = **4.90**
- Do you feel your students enjoyed and learned quality NVACSS Earth/Space science from using the FOSSNG kits? = **4.90**
- Would you be interested in participating in additional professional development trainings and workshops? 98.98% yes

Conclusion

Having the opportunity to offer a grade level specific program, provide all participating teachers the materials and resources required to implement the new NVACSS in the Disciplinary Core Idea area of Earth/Science, along with follow-up support sessions was critical to the overall success of this project. The main goal of the GTLF grant activities was to increase teacher knowledge of the standards and to facilitate successful implementation of the NVACSS in classrooms. Participants indicated significant gains in learning and a desire for more science training in the future.

Examples of final comments from participating teachers:
"Nice job, low stress! Thank You"
"Extremely valuable training for me! Thank You"

"Having the Materials for myself and the students was the only way I could meet the rigor of science standards"

"Thank you so much for sharing knowledge & hands on science activities"

"Gives me real experience I can use in classroom. Thank you, you are great!"

"Loved it – Thanks"

"Thank you for letting me part of this training. I consider myself to be a novice at science and really left with a lot more knowledge"

"It is great in helping me as a teacher to pass on not just the knowledge of science… but the excitement"

"I have gotten so much out of these trainings and I think my students have gotten the benefit. Thanks"

"This was a great way to learn NVACSS and NGSS"

"Great training opportunity!! Thank you!"

"Keep doing what you are doing! It's very helpful"

"Thank you! I have expanded my knowledge immensely over the past 3 months. I LOVE teaching Science in my class now! Even better my students LOVE IT!"

"Very interesting & educational training. Info. I can use right away!"

"This workshop was excellent! I feel completely confident in teaching Science in my classroom! Thank you!"

"Loved it! Thank you! ☺ Best training ever in six years!"

"I always have a great time in these trainings"

"Facilitator is excited about topic – it is contagious!"

"My students beg to do science now after these hands on lessons"

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HANDOUT Articles:

Science, Technology, Engineering, and Mathematics (STEM) Education
http://www.currtechintegrations.com/pdf/STEMEducationArticle.pdf

Fact Sheet: What STEM Education Is & What STEM Education Isn't
http://www.sdcoe.net/lret2/math/pdf/Fact_Sheet_STEM.pdf

Prepare and Inspire: K-12 Education in Science, Technology, Engineering, and Math (STEM) Education for America's Future
http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-stemed-execsum.pdf

Making science elementary
http://articles.boston.com/2011-03-04/news/29339334_1_science-education-science-instruction-middle-school-level

How Science Works chart
http://undsci.berkeley.edu/flowchart_noninteractive.php

NWRPDP Case Study 4:   Hands-on Learning in Earth/Space Science – Logic Model

Situation: Great Teaching and Leading Fund Grant implementation (GTLF) Earth Science NVACSS/NGSS Grades K – 8 for 288 teachers.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
Introduce teachers in the northwest region of Nevada to their grade level Nevada Academic Content Standards in Science (NVACSS) based on the Next Generation Science Standards (NGSS) in the Disciplinary Core Area of Earth Science Introduce teachers to the intent of how and why the NVACSS/NGSS were designed from *A Framework For K-12 Science Education* and how to implement them in their classrooms Introduce teachers to FOSSNG Earth Science Kits that address the NVACSS	Teachers will be guided through the format and background of *A Framework For K-12 Science Education* and the NVACSS based on the NGSS Increase use of NVACSS/NGSS lessons in classrooms in our region of the state	Participation in discussion and activities based on NVACSS/NGSS Guided time to prepare science lessons utilizing the provided resources from the grant	Increase awareness of NVACSS/NGSS Increase knowledge of NVACSS/NGSS Improve attitudes toward NVACSS/NGSS Improve skills related to NVACSS/NGSS Increase teacher access to science resources that address the NVACSS/NGSS Increase teacher motivation to integrate science instruction into their daily curriculum	Increase use of NVACSS/NGSS in the classroom Increase use of NVACSS/NGSS in decision-making Increase use of NVACSS/NGSS in policies Increase teacher awareness of networking resources that promote collaboration in the area of science education	Improve educational, social, economic, civil, and environmental conditions Increase teacher retention by improving their outlook on the importance and value of science education, providing access to the materials required to address the NVACSS/NGSS. Increase the number of scientifically literate students

Assumptions
- Continued funding
- Positive attitudes and beliefs about teaching NVACSS/NGSS

External Factors
- State, District and school site decisions
- Time allowed for NVACSS/NGSS instruction in classrooms
- Resources available to teach NVACSS/NGSS

Case Study 5: The Excitement of Hands-on STEM Learning

Introduction

In December of 2014, Nevada Governor Brian Sandoval delivered an Executive Department Proclamation that included, "Expanding computer science education faces challenges that must be addressed, including counting computer science classes towards high school graduation requirements, and providing professional development for computer science teachers." At about the same time The Federal Aviation Administration (FAA) named Nevada as one of six Unmanned Autonomous Systems (UAS) Designated Test Sites. The Nevada STEM Underwater and Aerial Vehicle Computer Science Institute (NSUAVCSI) was designed to address these education challenges and opportunities. With the grant's acceptance in June of 2016, the NWRPDP trainer, in collaboration with two Nevada start-up companies and NAME OF CO (an internationally renowned science research center), designed, prepared and implemented training for 18 middle and high school teachers in computer science and programming. This training also included the safety, ethics, and use of underwater and aerial vehicles. The trainings began in August of 2016 and culminated in May of 2017.

The goal of the trainings was to provide teachers with professional development that leads to school-wide shifts in instructional practice in STEM content by increasing teachers' content knowledge and pedagogical skills through hands-on learning important to STEM technologies for our state. (See Logic Model)

Instructional Context

Nevada's Northwest Regional Professional Development Program (NWRPDP) serves six Northern Nevada school districts: Carson, Churchill, Douglas, Lyon, Storey, and Washoe. NWRPDP provides support with implementing the Nevada Academic Content Standards in Science (NVACSS) for teachers in the Northwest region of Nevada. Based on information from a pre-survey, participating teachers lacked the training, materials, and expertise in computer programming and aerial and underwater robots to implement the NVACSS in STEM without intervention from specialists.

The number of participants came from Carson City, Churchill, Lyon, Storey, and Washoe County School Districts and totaled 18. Of these participants, 14 were middle school teachers and 4 were high school teachers. Experience level of teacher participants ranged from first year novice, to more than 20 year veterans.

In 2014, the Nevada State Legislature mandated by its adoption of the NVACSS and Nevada law that the adopted standards were to be implemented in schools within two years and that teachers must receive the professional development necessary to implement them in their classrooms. Funding of state grants such as the College and Career Ready grant are intended to help meet this mandate.

Initial Data and Planning

Participants were administered a seven-question survey about computer programming, unmanned aerial and underwater vehicles, and access to the materials necessary to implement a learning program in those areas. The Pre-survey data scores, based on a 1 – 5 scale, indicated the need for this professional development. Scores on the pre-survey fell between 1.0 and 2.1 out of 5. (See Table 1 for both pre- and post-survey scores)

The NWRPDP STEM Learning facilitator successfully wrote a Nevada State College and Career Ready STEM grant designed to train middle and high school teachers in the region in computer programming and unmanned autonomous vehicles.

Participant teachers received 12 hours of instruction and practice time using the NClab Online Computer Programing and 3D Modeling course to familiarize them with the structure and format of the online portal. They also received access to NClab for their students at school and at home. Each teacher received instruction in the ethics, safety, and piloting of aerial and underwater autonomous vehicles (drones) from experts. They also learned skills in soldering, acrylic welding, circuitry, wiring, assembly, and troubleshooting.

Each teacher received a programmable Parrot Mini-drone for classroom use and access to over 100 more for classroom checkout. In addition, 22 professional aerial vehicles were purchased and available for classroom checkout as well as six underwater vehicles capable of 300 foot depths. Additionally, the experts and the NWRPDP STEM Learning Facilitator involved in training teachers were available for classroom visits as well as attending classroom field trips to facilitate and support student use in appropriate settings to pilot the aerial and underwater vehicles.

Delivery of Services

The NWRPDP trainer facilitated 10 days of hands-on trainings as well as three follow-up trainings during the school year. In addition, as-needed support was provided through email and phone conversations. Classroom instruction for participating teachers included full day and evening classes that began in August of 2016 and ended in December 2016. Evening follow-up sessions took place in March, April, and May of 2017. Classroom visits and support began in December 2016 and continued through May 2017.

Results and Reflection

The results of the Pre/Post Survey (questions 1 – 10 below), the Post Training Survey (questions 8 – 10) and the Program Activity Evaluation are displayed below. The Pre/Post Survey reveals an overall substantial increase in all areas evaluated by the survey. The Post Training Survey additional questions indicate that teachers and their students were engaged by and found value from the training - enough to motivate them to utilize computer programming and unmanned aerial and underwater vehicles in their classrooms in upcoming years. Participant responses to the Program Activity Evaluation were highly positive and indicated that the workshops and follow-up trainings were very well received with all ratings between 4.3 and 4.6.

C&CR NSUAVCSI Pre / Post Training Survey

Please rate your knowledge of the following topics before attending the NSUAVCSI trainings and follow-ups and after attending using a 1 – 5 scale (1 = Poor, 5 = Excellent)

Table 1. NSUAVCSI Pre/Post Survey (1 = Poor, 5 = Excellent)

Question	Pre	Post
1. I feel comfortable in my knowledge of computer programming.	2.1	3.9
2. I feel comfortable in my knowledge of unmanned aerial vehicles.	1.0	3.7
3. I feel comfortable in my knowledge of unmanned underwater vehicles.	1.0	3.2
4. I feel comfortable in my knowledge of laws regarding aerial and underwater vehicle use.	1.0	3.6
5. I feel comfortable in my knowledge of safety in regards to aerial and underwater vehicle use.	1.2	3.9

Question	Pre	Post
6. I have the materials / resources necessary for my students to learn computer programming.	1.3	4.0
7. I have the materials / resources necessary to teach aerial and underwater vehicle use.	1.0	3.6

Post Training Survey Additional Questions
8. I intend to use the information from this training in the future within my classroom. **4.6**
   (1 = Very Unlikely, 5 = Very Likely)
9. Do you feel this training was valuable for you? **4.6**
   (1 = Not At All, 5 = Very Valuable)
10. Do you feel your students enjoyed and learned about Autonomous Unmanned Vehicles (UAV's)? **4.4**
   (1 = Not At All, 5 = Yes, To A Great Extent)

Program Activity Evaluation
The Program Activity Evaluation indicated that the workshops and follow-up trainings were very well received with all ratings between 4.3 and 4.6 (Rating scale 1 – 5). Participants again confirmed that they will use the knowledge and skills from this training in their classrooms or professional duties (4.5)

Conclusion
Having the resources, materials, and experts necessary to train teachers and implement computer programming and autonomous aerial and underwater vehicle courses in middle and high school classrooms, along with the follow-up sessions and availability of experts to facilitate classroom lessons and field trips, were critical to the overall success of this project. The main goal of the C&CR grant was to introduce teachers, and to a greater extent their students, to computer programming and how it relates to utilizing, troubleshooting, and programming Unmanned Autonomous Vehicles as well as to further the technical skills required for students to be college and career ready. Responses on both the Pre-Post Training Survey and the Program Activity Survey indicated that teachers overwhelmingly intended to use the information from the training in the future within their classrooms (Pre/Post Question 8, 4.6) and that the activity added to their knowledge of standards and/or subject matter content (Program Activity Survey Question 6, 4.6).

Comments from participating teachers:
"I loved this class and feel that it has helped me with new strategies for hands-on math learning."
"This was a truly incredible and collaborative teaching and learning experience. I would highly recommend it to other teachers attempting to supplement STEM instruction."
"This was an excellent opportunity to incorporate new technologies into my classroom."

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Fact Sheet: What STEM Education Is & What STEM Education Isn't
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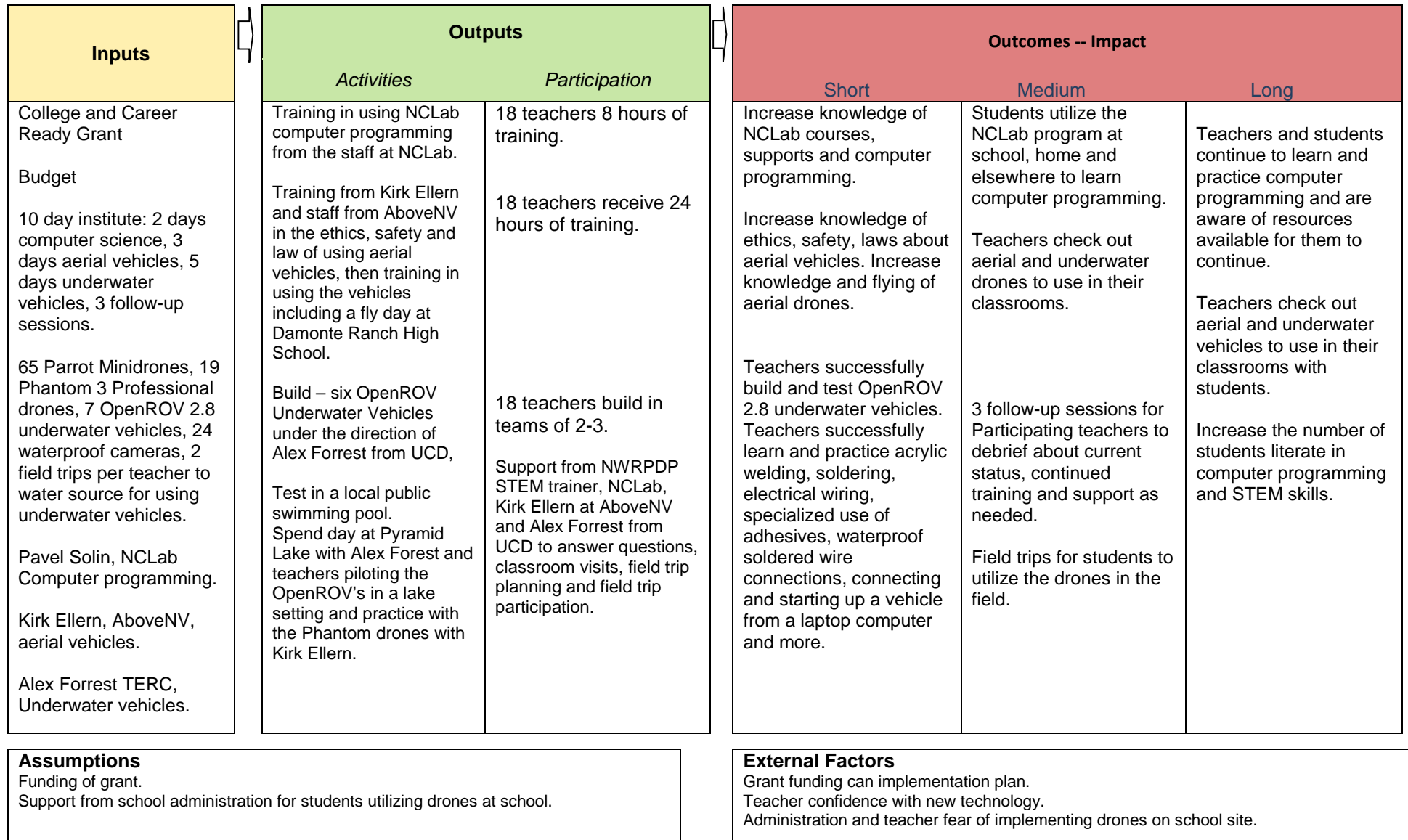Prepare and Inspire: K-12 Education in Science, Technology, Engineering, and Math (STEM) Education for America's Future
http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-stemed-execsum.pdf

Making science elementary
http://articles.boston.com/2011-03-04/news/29339334_1_science-education-science-instruction-middle-school-level

How Science Works chart
http://undsci.berkeley.edu/flowchart_noninteractive.php

NWRPDP Case Study 5: Nevada STEM Aerial and Underwater Vehicle Computer Science Institute (NSAUVCSI) - Logic Model

Situation: Teachers who participate in the NSAUVCI will increase their knowledge of computer science and STEM and the instructional strategies, ethics, and safety requirements that accompany underwater and aerial vehicle usage.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
College and Career Ready Grant

Budget

10 day institute: 2 days computer science, 3 days aerial vehicles, 5 days underwater vehicles, 3 follow-up sessions.

65 Parrot Minidrones, 19 Phantom 3 Professional drones, 7 OpenROV 2.8 underwater vehicles, 24 waterproof cameras, 2 field trips per teacher to water source for using underwater vehicles.

Pavel Solin, NCLab Computer programming.

Kirk Ellern, AboveNV, aerial vehicles.

Alex Forrest TERC, Underwater vehicles. | Training in using NCLab computer programming from the staff at NCLab.

Training from Kirk Ellern and staff from AboveNV in the ethics, safety and law of using aerial vehicles, then training in using the vehicles including a fly day at Damonte Ranch High School.

Build – six OpenROV Underwater Vehicles under the direction of Alex Forrest from UCD,

Test in a local public swimming pool.
Spend day at Pyramid Lake with Alex Forest and teachers piloting the OpenROV's in a lake setting and practice with the Phantom drones with Kirk Ellern. | 18 teachers 8 hours of training.

18 teachers receive 24 hours of training.

18 teachers build in teams of 2-3.

Support from NWRPDP STEM trainer, NCLab, Kirk Ellern at AboveNV and Alex Forrest from UCD to answer questions, classroom visits, field trip planning and field trip participation. | Increase knowledge of NCLab courses, supports and computer programming.

Increase knowledge of ethics, safety, laws about aerial vehicles. Increase knowledge and flying of aerial drones.

Teachers successfully build and test OpenROV 2.8 underwater vehicles. Teachers successfully learn and practice acrylic welding, soldering, electrical wiring, specialized use of adhesives, waterproof soldered wire connections, connecting and starting up a vehicle from a laptop computer and more. | Students utilize the NCLab program at school, home and elsewhere to learn computer programming.

Teachers check out aerial and underwater drones to use in their classrooms.

3 follow-up sessions for Participating teachers to debrief about current status, continued training and support as needed.

Field trips for students to utilize the drones in the field. | Teachers and students continue to learn and practice computer programming and are aware of resources available for them to continue.

Teachers check out aerial and underwater vehicles to use in their classrooms with students.

Increase the number of students literate in computer programming and STEM skills. |

Assumptions
Funding of grant.
Support from school administration for students utilizing drones at school.

External Factors
Grant funding can implementation plan.
Teacher confidence with new technology.
Administration and teacher fear of implementing drones on school site.

Case Study 6: Development of a K-8 Math Certificate Cohort to Increase Teacher Competency

Introduction
Elementary teachers are content generalists, meaning their content knowledge spans four content areas (English Language Arts, Mathematics, Science, and Social Studies). Rarely do elementary teachers focus their professional learning in one content area because they are always responsible for all of them. Most have strengths in one area or another, but because significant time is rarely allotted to focus on one content area, elementary teachers tend to stay in their comfort zone and only grow their strengths.

Conversely, secondary math teachers focus only on mathematics; hence, their math knowledge is very strong. Sometimes, however, the math instruction is limited to computation, which leaves students at a disadvantage when tasked with in-depth mathematical tasks requiring application. These teachers tend to shy away from flexible problem solving strategies and use of models as a means to build conceptual understanding, ultimately eliminating two of the three levels of rigor in the Nevada Academic Content Standards for Mathematics.

This case study will focus on increasing math skills and content knowledge for K-8 teachers. Each of the rural counties involved in this case study, along with many others in the state of Nevada, are experiencing a teacher shortage in the areas of upper level mathematics due to licensing restrictions. Many of these teacher positions are filled with individuals through the Alternative Route to Licensure (ARL) program, whereby individuals from professions in the private sector with skills in the related field can be hired to fill teacher vacancies without the necessary training in pedagogy or standards. This effort combined with minimal math content knowledge of current K-8 teachers has created a void in solid math instruction. (See Logic Model)

Instructional Context
In order to fill the math instruction void, a year-long math program was instituted through the Northwest Regional Professional Development Program (NWRPDP) based on content developed in the Southern RPDP. This math program encompasses content necessary to support students in the Nevada Academic Content Standards (NVACS) in math and provides participants with a certificate of completion through a cohort model. This math cohort is comprised of teachers from three different counties: Douglas, Carson, and Washoe. Nine participants are from Douglas County, 20 from Carson City, and one from Washoe county. Two of those participants are employed by the NWRPDP for the purpose of replicating this cohort in all Northwest counties in the future.

Two districts are considered rural. One district serves approximately 7,500 students, 52% of which are ethnicities other than white.   At the elementary level, 14% of students have Individualized Education Plans, 18% are English Language Learners, and 35.8% qualify for Free and Reduced Lunch. The other rural district has a total enrollment of about 6,000 students, of which 37% are ethnicities other than white. Fourteen percent of students are on Individualized Education Plans, 5.56% are English Language Learners, and 30.71% qualify for Free and Reduced Lunch. (Nevada Report Card, 2015)

Initial Data and Planning
All participants completed a content assessment and efficacy survey. Both the content assessment and survey were completed during the first week of the cohort and at the end of the Algebra course in May, the midpoint of the cohort. The mathematics concept assessment measures the middle school math

content knowledge of the teachers. Ability to use flexible problem solving strategies and mathematical models was also assessed.

Megan Tschannen-Moran's "Teacher Sense of Efficacy" (TSES) survey was used to measure teacher efficacy at the start and midpoint, and will be administered again at the finish of the cohort year. The rating scale used was 1 (none at all) to 9 (a great deal).

Delivery of Services
There are six courses for participants to complete: Operations and Number Systems; Problem Solving; Algebra; Probability, Statistics, and Geometry; Euclidean and Non-Euclidean Geometry; and Practicum. The focus for each of the courses is not limited to the mathematics, but includes pedagogy, discourse, and the three shifts of NVACS-Mathematics (focus, coherence, and rigor).

Participants will have completed two of the six courses as of June 1st. Two courses will be completed during the summer months, and the final two courses will be completed by December 2017.

Results and Reflection
Results from the TSES are displayed below (Table 1). All areas showed increased in teachers' perceptions of their own efficacy, especially in the areas of establishing routines for activities and using a variety of assessment strategies. The positive results from the TSES indicate an impact on learning. Participants are learning high-level mathematics content in an environment enriched with strong instructional practices, such as problem solving, discourse, manipulative use, and cooperative learning. Structuring the learning in this manner has increased teacher confidence in using similar strategies in their own classrooms.

Table 1: Teacher Efficacy Survey Results

Question	Average Score (Pre)	Average Score (Midpoint)	Change	t-score	p value
How much can you do to get through the most difficult students?	6.58	7.83	+1.25	3.56	< .01
How much can you do to help your students think critically?	6.42	7.67	+1.25	4.49	< .001
How much can you do to control disruptive behavior in the classroom?	7.33	7.75	+0.42	1.16	.27
How much can you do to motivate students who show low interest in school work?	6.08	7.00	+0.92	1.73	.11
To what extent can you make your expectations clear about student behavior?	8.17	8.17	0.00	0.00	1.00
How much can you do to get students to believe they can do well in school work?	7.08	7.92	+0.83	2.80	< .05
How well can you respond to difficult questions from your students?	7.33	7.92	+0.58	1.54	.15
How well can you establish routines to keep activities running smoothly?	7.75	8.67	+0.92	2.11	.06
How much can you do to help your students value learning?	6.67	7.83	+1.17	3.19	< .01*

Question	Average Score (Pre)	Average Score (Midpoint)	Change	t-score	p value
How can you gauge student comprehension of what you have taught?	6.83	7.92	+1.08	4.73	< .001*
To what extent can you craft good questions for your students?	6.33	7.33	+1.00	2.87	< .05*
How much can you do to foster student creativity?	6.75	7.58	+0.83	2.42	< .05*
How much can you do to get children to follow classroom rules?	7.50	8.00	+0.50	0.90	.39
How much can you do to improve the understanding of a student who is failing?	6.25	7.58	+1.33	4.00	< .01*
How much can you do to calm a student who is disruptive or noisy?	6.92	7.42	+0.05	1.07	.31
How well can you establish a classroom management system with each group of students?	7.58	7.92	+0.33	0.63	.54
How much can you do to adjust your lessons to the proper level for individual students?	6.50	7.67	+1.17	2.55	< .05*
To what extent can you use a variety of assessment strategies?	6.50	7.83	+1.33	3.75	< .01*
How well can you keep a few problem students from ruining an entire lesson?	7.08	7.75	+0.67	1.61	.14
To what extent can you provide an alternative explanation or example when students are confused?	7.17	7.92	+0.75	2.45	< .05*
How well can you respond to defiant students?	6.75	7.58	+0.83	2.28	< .05*
How much can you assist families in helping their children do well in school?	5.67	6.92	+1.25	2.92	< .05*
How well can you implement alternative teaching strategies in your classroom?	6.83	7.92	+1.08	3.03	< .05*
How well can you provide appropriate challenges for very capable students?	7.00	7.83	+0.83	1.89	.09
How much can you do to get students to believe they can do well in schoolwork?	7.08	8.08	+1.00	4.06	< .01*

Note. $n = 12$. * indicates significant positive change from pre to midpoint assessment at >.05 or greater.

The Mathematics concepts assessment was designed to assess teacher competency in a range of mathematics. Results of the assessment are displayed in Table 2 below. The assessment includes questions on mental math strategies applied to the four operations: algebra, linear and quadratic equations, probability, and statistics. Some questions required developing a model or writing a word problem that accurately represented an expression in order to assess conceptual understanding. This range of questions was intentional in that it more accurately measured the concepts participants were expected to learn during the first four courses.

There was an average increase of 37.24% in scores on the post-assessment. The learning, or re-learning, of these advanced concepts during the math workshops impacted the positive growth. Participant confidence also impacted the boost in scores. Several participants left questions blank, did not attempt questions, or put forth minimal effort with questions on the pre-assessment. Each person attempted all questions on the post-assessment, which demonstrates their increase in confidence in tackling difficult concepts.

Table 2: Mathematics Concept Assessment

Assessment Administration	Score
Pre-Assessment Average Score	42.13%
Post-Assessment Average Score	79.37%

Conclusion

Teachers participating in this cohort have shown tremendous growth. Both the efficacy survey and the concept assessment showed positive results, even after only two courses have been completed. Attendance has been at or above 90% each week, which shows the teacher dedication to extending their own learning for the benefit of students.

This cohort has been inspirational not only for the facilitator, but for teachers. Teachers from several counties have joined together to learn math, exposed their vulnerabilities, and have reflected on how their teaching practices have impacted student learning. Their personal reflections for the two completed courses expose the challenges faced in the classroom and how they are using their own learning experiences in this cohort to reach challenging students.

One participant commented, "I have really enjoyed the math experience with the cohort. The instructors are very positive, knowledgeable, and they are changing the way I see math!"

Another teacher shared, "Participating in this cohort has allowed me to revisit the feelings of uneasiness and frustration I remember feeling in high school. It's allowed me to connect with my students who struggle in mathematics…The class has also helped me think about the tasks I give my students and how I'm impacting the mindset of my students when it comes to math. I've thoroughly enjoyed participating in the cohort this far."

Another benefit of this cohort has been the strong collaboration between multiple school districts in Northwestern Nevada. Teachers work together to tackle challenging problems and often engage in discussions focused on instruction. Each district has different curriculum resources and district initiatives. However, these teachers are able to discuss ways to enhance math learning for students, regardless of curriculum.

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NWRPDP Case Study 6:   Development of a K-8 Math Certificate Cohort to Increase Teacher Competency - Logic Model

Situation: Teachers who participate in a K-8 Math Certificate cohort will increase their own content knowledge and pedagogy in mathematics instruction, which will lead to increased student achievement.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
Budget NWRPDP Math Facilitators Carson City School District K-8 teachers Carson City School District STEM Coaches Substitute Availability	Training Coaching Peer Observation Optional Training opportunities Monthly PLCs	K-8 teachers Elementary STEM Coaches Secondary Math Implementation Specialists Site and district administrators	Increased math content knowledge Increased pedagogical knowledge Increased teacher confidence in content knowledge and instructional strategies **Measures**: RPDP Feedback Form, Pre/Post Assessment (content knowledge), Teacher efficacy survey	Enhanced instructional practice (e.g., student discourse, mathematical modeling, rigor) Increased implementation of training goals/objectives Increased grade level collaborative matching at school sites Increased teacher efficacy Peer Observation **Measures**: Observation Implementation checklists	Increased student achievement Increased teacher retention Increased passing rates in secondary math courses Increased high school graduation rate **Measures**: Existing data (Carson City School District)

Assumptions	External Factors
Teacher orientation and training will lead to teacher efficacy. All new hires will be available and attend training. Positive attitudes and beliefs about Professional Practice. Math competency leads to increased student engagement and achievement.	District resources Release time (substitutes) Money

Case Study 7: Improving Curriculum Implementation in Math to Increase Student Achievement

Introduction

"The new educational standards most states recently adopted emphasize the need for students to engage in collaborative discussions — a skill they'll need in college and the workforce. At the same time, America's teachers also are working together more effectively and frequently. Collaboration can greatly improve teaching and learning. But all too often, teachers have worked in silos, missing critical opportunities to exchange ideas and learn from one another. The Common Core State Standards are helping to fuel the shift to a more collaborative environment in education. They call for significant instructional changes — emphasizing critical thinking, real-world problem solving, deeper learning, research and analysis. Teachers are looking to each other to share ideas about how to adjust their practices accordingly (Anderson, C., 2016)."

In Douglas County School District (DCSD), elementary teachers have been implementing the Nevada Academic Content Standards (NVACS), based on Common Core State Standards, in math for the last several years. While teachers have become familiar with the new standards for their grade levels, they have also been developing their own conceptual understanding of mathematics at their grade levels. DCSD is in its second year of implementing a new math curriculum. This year, the focus was on creating consistent implementation in K-5 classrooms by encouraging and creating opportunities for collaboration. It is the hope that as this rigorous curriculum is implemented more consistently, student achievement scores in mathematics will improve. (See Logic Model)

Instructional Context

DCSD is a rural school district located in Northwestern Nevada. DCSD is comprised of 13 schools, including 7 elementary schools, 2 middle schools and 4 high schools. Approximately 6,050 students are enrolled in DCSD. The student population is comprised of 67.52% white students, 20.74% Hispanic students, 3.38% American Indian students and 5.89% students who are more than one race. DCSD has an Average Daily Attendance rate of 95.5%. It has a cohort graduation rate of 88.52 as reported in the Nevada Report Card (2016).

According to the Nevada School Performance Framework (NSPF), Douglas County School District has seven three star schools, four schools rated at four stars and two five star schools. Table 1 shows a summary of the standards-based Criterion-Referenced Smarter Balanced test performance for grades 3-5 based on 2015-16 assessment results. Students scoring ED (emerging development) and AS (approaching standard) do not meet proficiency. Students scoring MS (meets standard) and ES (exceeds standard) meet or exceed the standard. According to the 2015-16 NSPF, 57.5% of 3rd graders were proficient in math, 50.4% of 4th graders were proficient, and 40.3% of 5th graders were proficient. Math continues to be a focus in the district.

Table 1: Standards-based Test Performance Grades 3-5: Reading and Math 2015-16

Grade Level	Reading	Mathematics
3	ED 16.7% AS 25.0% MS 31.8% ES 26.5%	ED 18.1% AS 24.4% MS 35.8% ES 21.7%
4	ED 18.6% AS 22.9% MS 29.2% ES 29.4%	ED 15.2% AS 31.4% MS 35.1% ES 18.3%
5	ED 15.9% AS 23.7% MS 36.5% ES 23.9%	ED 24.1% AS 35.5% MS 21.8% ES 18.5%

Initial Data and Planning

Teachers reported that they feel more comfortable implementing the new curriculum this year, having struggled to learn the curriculum layout and the mathematical concepts during the 2015-16 school year. In looking at the Smarter Balanced results from last year, 42.5 percent of the students in third grade in DCSD were either emergent/developing (ED) or approaching standard (AD), showing they had not yet mastered important mathematical concepts to the level expected in the standards. In looking at the Measures of Academic Progress (MAP) scores in third grade for mathematics during the 2014-15 school year, three elementary schools showed students meeting or exceeding expected growth in mathematics between the fall test administration and the spring test administration. Looking at third graders in the 2015-16 school year, which was the first year of implementing a new, more rigorous math curriculum, five elementary schools showed that their students met or exceeded expected growth between the fall and spring test administration. Taking this data into consideration, the focus of math instruction and curriculum implementation of the curriculum in third grade became the focus, with the hope of seeing improvement in third grade student achievement data.

Delivery of Services

Teachers were initially asked to implement the math curriculum for the 2015-16 school year and to continue implementation in the 2016-17 school year. Two math leaders were selected at each elementary school site to hold six staff meetings during the school year and to support teachers with continued implementation of the curriculum. Each elementary teacher was given the option for online access to be able view videos showing how to teach the curriculum and other support resources. A professional development trainer at the district level modeled math lessons in multiple classrooms throughout the district based on teacher request.

All elementary K-5 teachers and some specialists attended a full-day professional development designed to help them understand the curriculum and its instructional design. The day focused on customizing the lessons and differentiating instruction. During this day, teachers collaborated with one another around their successes and worked on common assessments. As an additional support, thirty-three PreK-5 teachers attended an optional in-service outside of the school day designed to help them plan their lessons and collaborate around mathematical content.

A professional development trainer and a district office administrator completed one twent- minute walk-through in each third grade class to observe the implementation of the elements in the curriculum.

During the walk-throughs, a modified Instructional Practice Guide (Achieve the Core, 2016) was used. Data was collected on the element of the lesson being observed in addition to the quality of prompts and discussion, engaging students in the learning, and formative assessment.

Finally, all elementary teachers were given the opportunity to participate in peer observations of and discussions around the math curriculum. Thirty-eight teachers participated in observations. There were nine different observation choices ranging from Kindergarten through fifth grade. Teacher feedback from these observations indicates a high degree of satisfaction with the observations and debriefing discussions, with 100% of participants stating that the observation matched their needs and provided opportunities for interaction and reflection. When asked about the most important takeaways from the observation, teachers provided the following comments:

- It is nice to observe my colleague teaching the same grade level and curriculum and realizing she deals with the same obstacles I do. I personally benefit from observing others and love that we had this opportunity.
- Time management for a math lesson, materials management, teaching strategies for this concept, a new way to approach sprints (for fluency).
- I absolutely LOVED being able to go into another 4th grade class and see another teacher teach a lesson that I also teach. It is so valuable to observe other teachers and yet, we never have the time to do it. The training on Friday was one of the most valuable because it helped me see things that I can do to improve my instruction as well as things that I do similar to this teacher. Observing a like grade level class also sparked conversations and helped me problem solve some of the things that I feel I am having trouble doing. It was also so nice to see other 4th grade students interact with the material and see that my students have the same misconceptions. Today's training was one of my favorite trainings because I can immediately implement things that I saw.

Results and Reflection
In reviewing the walk-through data for all twenty-one third grade classrooms, some trends emerged. While teachers were using the math curriculum and the presentation flipcharts that go with it, they were not customizing the lesson in order to balance the time being spent on fluency, concept development, and application. In observations, too much time was being spent on fluency, which impacted the kinds of problems students were working on and the level of discussion they were having around their thinking. Figure 1 shows a summary of the walk-through data for third grade classrooms. Observations were scored on a scale from 1 to 4, with 1 being "The teacher does not provide students opportunity and very few students demonstrate the behavior" to 4 being "The teacher provides consistent opportunities and most students demonstrate this behavior." Interestingly, no matter what element of the lesson was observed, student engagement with the mathematics was high (3.25).
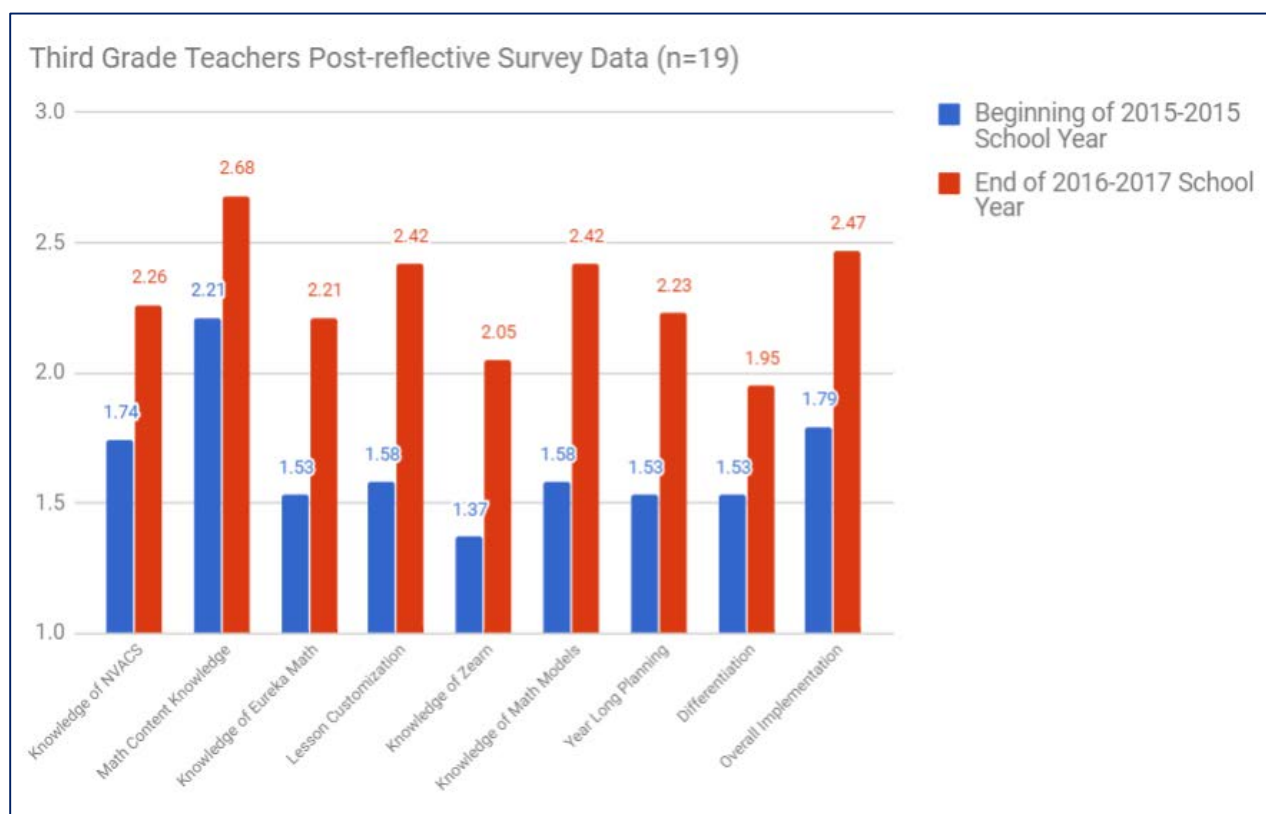
Figure 1: Third Grade Walk-through Data
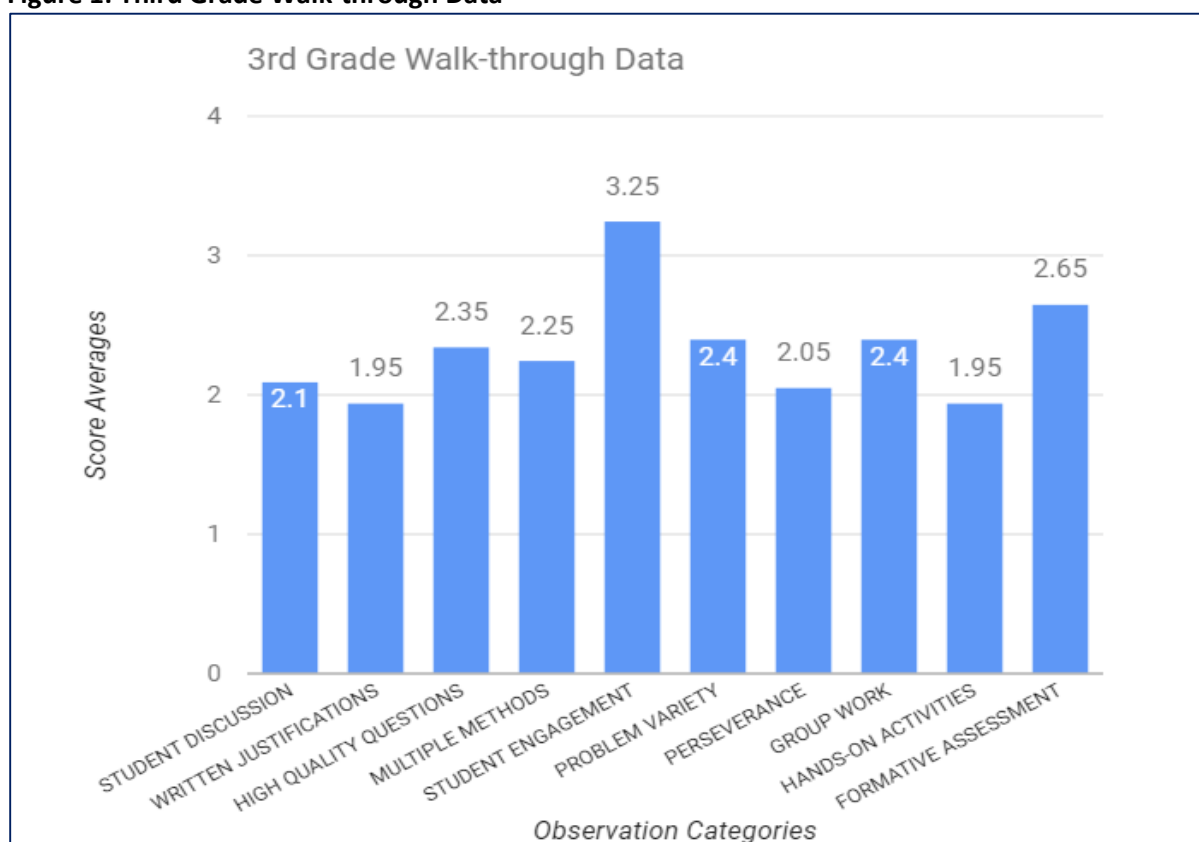
The initial walk-through data served as a baseline for future observations and provided formative assessment used to tailor professional development sessions that the math leaders took back to their staffs. Math leaders focused their meetings on customizing the flipcharts to balance instruction during the lesson that would allow for more student discussion and work on more challenging problems in addition to the focus on fluency.

All third grade teachers were given the opportunity to complete a post-reflective survey at the end of the 2016-17 school year. Nineteen of the twenty-one third grade teachers responded to the survey. Figure 2 summarizes the data collected in the post-reflective survey. In general, the data showed large improvements in all categories, with the most improvement being in knowledge of the curriculum and the models being used. The improvement in knowledge of models was significant because the models being used support multiple methods of solving problems and providing students with more tools to use when working with challenging problems. Comfort with differentiation using the math materials showed the smallest gain. Differentiating in math lessons will continue to be a focus during the 2017-18 school year.

Figure 2: Third Grade Post-Reflective Survey Data

Third Grade Teachers Post-reflective Survey Data (n=19)

Conclusion

The results gathered from the third grade walk-throughs served as valuable baseline data. Some steps were taken to address some of the needs that emerged during the walk-throughs. Student discussion and justification of student thinking in writing, along with providing hands-on activities that build perseverance, will be the focus of professional development during the 2017-18 school year. The need to develop a better understanding of ways to differentiate will also be a focus. Many teachers have worked through developing their own understanding of the content and the organization of the lessons and curriculum. They are ready to fine tune their instruction to incorporate the mathematical practices with more consistency. Additional walk-through data will be collected during the 2017-18 school year to look for needs, areas of improvement, and trends. Additionally, Smarter Balanced data and MAP data will continue to be used to track student achievement in math.

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NWRPDP Case Study 7:   Improving Curriculum Implementation in Math to Increase Student Achievement - Logic Model

Situation: K-5 implementation of math curriculum in Douglas County School District in order to improve student achievement in math and math pedagogy.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
RPDP trainer	K-5 math cohorts-spring and fall	K-5 teachers, specialists, administrators	Improved math instruction using math materials	Enhanced self-efficacy in teaching elementary math	Improvement in student achievement in math
Math curriculum teacher's materials, web access, manipulatives	Lesson planning		Improved content knowledge in math	Change in instructional practice in math	Increased graduation rate
Teachers	Modeling lessons in classrooms		Improved efficiency in teaching all of the math content	• Increased use of formative assessment in math planning	Increased passing rates in secondary math courses
Students	Classroom observations with feedback				
Administrative Expectations	Classroom walkthroughs in all 3rd grade classrooms twice during the year			• Increased teaching for mastery over time	Increased student engagement in mathematics
Substitutes	In-service classes for credit				
Budget					
Training room facilities	2 math leaders per elementary site				
Support from Douglas County School District	• Monthly staff meetings at sites • Attendance at math leader meetings				
RPDP trainer attendance at 2 day math training PD in curriculum	Site staff meetings		Measures: Training Ratings Case Study Post-reflective survey Walkthrough data using modified Instructional Practice Guide	Measures: Case study Confidence ratings – perception data in post-reflective survey	Measures: School, District, and State data: SBAC, MAP
Stipends for math leaders	Access to online teaching resources				
Google classroom	Analysis of 3rd grade math MAP scores in fall and spring				

Assumptions
Mandatory attendance at math cohorts
Adoption of Eureka materials by school board and DOE
Differing levels of teacher math content knowledge at the elementary level
Math competency leads to higher student engagement and increased graduation rates

External Factors
District math scores lower than ELA scores
Adoption procedures of new materials

Case Study 8: Deepening Understanding in Mathematics

Introduction

"Improving teachers' mathematical knowledge and their capacity to use it to do the work of teaching is crucial in developing students' mathematical proficiency" (Kilpatrick, Swafford, & Findell, 2001; National Research Council (U.S.), 2001).

This statement from the National Research Council in 2001 makes clear that teachers must know mathematics well in order for students to become proficient in mathematics. However, Ball, Thames, and Phelps (2008) asserted that simply taking more math courses is not sufficient for knowing how to teach students well. A study by Borko et al. (1992) describes a student teacher, who, despite having taken calculus and multiple other high-level mathematics courses, was not able to explain to a student why the invert-and-multiply algorithm works. Ball, Thames, and Phelps (2008) also state that in addition to content knowledge, teachers must also have mathematical knowledge for teaching. Specialized content knowledge for teaching mathematics is not typically needed for purposes other than teaching. Some examples involve looking for patterns in student errors, determining whether a non-standard approach to solving a problem would work in general, and knowing the difference between "take-away' and "comparison" models of subtraction. The Nevada Academic Content Standards (NVACS) call for a balance of procedure and understanding (NVACS, 2010). In order to build the conceptual understanding that the Nevada Academic Content Standards call for, teachers must have strong mathematical knowledge for teaching skills as well as deep content knowledge. Based on these concepts of raising content knowledge as well as pedagogy, Washoe County School District (WCSD) provided a series of grade specific math courses that encompassed both concepts. The focus of this study will be identifying changes in the instructional practices of the fourth grade teachers involved in this program. (See Logic Model)

Instructional Context

Washoe County School District is an urban school district, with approximately 64,000 students. In the 2016-17 school year, 13.9% of the students had an Individualized Education Plan, 15.4% were English Language Learners, and 46.7% received Free or Reduced Lunch. For the 2016-17 school year, teachers in grades K-5 received new instructional materials in support of their mathematics teaching. In the year prior to the new instructional materials adoption, 26% of elementary students in the district scored at a level one on the math portion of the Smarter Balanced Assessment Consortium (SBAC) test, 32% scored a level two, 25% scored a level three, 18% scored a level four. Students who score a three or four are considered proficient for their grade level.

Based on district-wide test scores and feedback that teachers wanted math training, quarterly courses were designed to provide teachers the training and support required to engage students in quality math instruction that incorporated the NVACS (based on the CCSS). Teachers received support in understanding of mathematical content knowledge as well as mathematical knowledge for teaching and how to apply it with their new instructional resources and the students in their classrooms.

Initial Data and Planning

Based on the previous state assessment data, as well as the implementation of new instructional materials, courses were offered to all K-5 teachers across the district designed to developing both content knowledge and in mathematical knowledge for teaching. Six different courses were offered, each specific to one grade level, and were offered during the school day with teachers being subbed out

of their classrooms, or were offered in the evening with teachers receiving in-service credit for attending. The participants in the courses came from schools across the District and ranged from first year teachers to teachers with fifteen years of experience or more. The focus of this study is fourth grade teachers.

Courses were scheduled near the beginning of each school quarter and were designed to focus on the math content that would be taught in the upcoming quarter. During the final quarter, the content would focus on the math for the beginning of the next school year.

Delivery of Services

The NWRPDP trainer, along with the WCSD Curriculum and Instruction trainers, successfully delivered four quarterly trainings to each of two groups of fourth grade teachers. One class was subbed out of their classrooms to attend training during the school day. The other class attended in the evening for in-service credit. Each of the sessions had a different focus related to fourth grade standards. The first session focused on problem-based learning and multiplication strategies, the second session was fractions, the third session developed geometry understandings, and the last class focused on fluency. Participants in both the fourth grade sub-out class and the in-service class were given a survey at the end of the course asking them to reflect on how their math content knowledge and mathematical knowledge for teaching have changed due to the information presented in the class. Written feedback from the participants at the end of each session also gave insight to how participants were planning on using their new learning. In addition, some participants volunteered for classroom observations along with follow up interviews.

Results and Reflection

Observations of two classrooms were conducted between the third and fourth sessions of the Deepening Understanding course. Both teachers were teaching lessons around content discussed in the third session of the course. The teacher asked the students initially to write whether they agreed or disagreed with a fictional student's problem solving strategy. Then the students were observed discussing their ideas with peers and sharing their strategies to the whole class in both classrooms. One of the teachers indicated that she had changed her teaching methodology as a result of coming to the classes and was working hard at having quality conversations around the mathematics in her classroom. At the completion of the Deepening Understanding Professional Learning Team course, participants were given a post-reflective survey regarding the effectiveness of the course. Teachers rated themselves on their knowledge of the standards and teaching strategies for implementing them before and after the course. The results are shown in Table 1 below:

Table 1. Results of Post-reflective Survey (Rating Scale 1 – 5)

	Mean before	Mean after	Change	t score	p value
NVACS in Mathematics	3.19	4.25	+1.06	6.65	< .001
How to structure activities/pedagogy and engage students with the NVACS in Mathematics at your grade level.	3.13	4.13	+1.00	8.25	< .001
Deeper conceptual understanding of the mathematics inherent in the NVACS	3.00	4.44	+1.44	8.42	< .001

	Mean before	Mean after	Change	t score	p value
Ideas for student engagement with the NVACS in mathematics	3.13	4.21	+1.08	4.70	< .001
Activities to implement in support of curricula for NVACS in Mathematics	3.07	4.21	+1.14	5.96	< .001
Positive guidance and management techniques in the classroom	3.50	4.29	+0.79	3.94	< .01
Teaching strategies that are aligned to and assess the NVACS in Mathematics	3.50	4.43	+0.93	4.50	< .001

n = 16

All pre to post evaluation questions (above table) revealed positive gains and were significant at the p<.001 or p<.01 levels.

Teachers were asked to rate themselves on a scale of one to five both before and after the trainings in each of seven categories: Knowledge of Nevada Academic Content Standards, how to structure activities/pedagogy and engage students with the Nevada Academic Content Standards, Deeper conceptual understanding of the mathematics inherent in the Nevada Academic Content Standards, Ideas for student engagement with the Nevada Academic Content Standards, activities to implement in support of curricula for Nevada Academic Content Standards, positive guidance and management techniques in the classroom, and teaching strategies that are aligned to and assess the Nevada Academic Content Standards in Mathematics. Survey results indicated that teachers had a better understanding in all the topics after the trainings with an average growth in all categories of 1.06 points. A *t-test* was performed which revealed that the positive gains were statistically significant.

The first five categories had growth greater than one point, where the last two categories were just under one point growth each. The category where teachers averaged the most growth was a deeper conceptual understanding of the mathematics inherent in the Nevada Academic Content Standard which was one of the primary purposes of the class. One teacher added an additional comment stating, "The in-depth look at a topic/standard coming up is valuable to me as a new educator. I also thought looking at the progression documents for K-4 was very helpful." When asked what they liked best about the course, one participant responded, "…understanding how to facilitate conceptual understanding—challenging our thinking and understanding."

Teachers also were surveyed about the effectiveness of the training by rating each of the following areas from 1 (poor) to 5 (excellent): organization and preparation, style and delivery, responsiveness to participants, creating a learning environment, content of the training, intent to use the information from the training, value of training, and student learning of conceptual understanding (See Table 2).

Table 2. Effectiveness Ratings of the Deepening Understanding Training (Rating Scale 1 – 5)

Effectiveness of Training	Average Rating 1 poor 5 excellent
Organization and Preparation	4.75
Style and Delivery	4.44
Responsiveness to Participants	4.63
Creating a Learning Environment	4.69
Content of the Training	4.63
I intend to use the information from this training in my classroom	4.57
This training was valuable	4.57
Do you feel your students enjoyed and learned quality conceptual understanding from using the strategies learned?	4.36

The average scores show that participants were pleased with the organization and content of the class with all 8 categories averaging a score higher than four. Teachers shared how much they enjoyed the structure of the course with comments like, "I love coming because this sets me up for upcoming lessons. I share this information with my grade level in PLC," and, "I recommend more time added to this course." At the end of the course, teachers reflected and shared stories about how they implemented certain lessons in their classrooms and the students' responses. One teacher discussed how she had implemented an activity we had done in class where we had sorted shapes by their attributes. As she moved forward with lessons around the same content, she realized she had given the students some incorrect information about trapezoids. She was worried that students would be confused when she corrected the information. She was surprised when the students understood immediately and continued to move forward with their learning. She believed that the reason students could assimilate the new information so easily was because they had learned the shape attributes so well through the sorting activity.

Conclusion

Results show that teachers who attended this course felt they had gained knowledge of the standards and their ability to teach mathematics well. They felt that the strategies they were employing in the classroom as a result of this class were beneficial to their students. Although these teachers felt the training helped them teach mathematics better, the number of teachers attending this course is a small percentage of the total number of teachers in Washoe County School District. Some of the participants also indicated that they wished there was more time for additional learning while others reflected that this course should be mandatory for all teachers. These responses show that there is a need for additional mathematics professional development opportunities. This course will continue to be offered in the next school year.

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NWRPDP Case Study 8: Deepening Understanding in Mathematics - Professional Learning Team K-5 Math - Logic Model

Situation: Teachers in grades 4 and 5 are taking a course with the goal of increasing teacher math content knowledge and math pedagogy around upcoming math units of study.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
RPDP trainer	K-5 quarterly trainings	K-5 teachers	Improved understanding of models students may use	Teacher enhanced efficacy in teaching elementary math	Improvement in student achievement in math
C & I trainers	• Inservice for credit				
Classroom teacher trainers	• Sub-out option		Student development along a continuum	Change in instructional practice in math	Increased passing rates in secondary math courses
Students	Classroom observation and feedback	Selected participants	Improved teacher content knowledge in math	• Formative assessment during instruction	Increased graduation rates
Curriculum	Teacher interviews	C & I trainers Classroom co-teachers		• Teaching for mastery over time	
Administrative Expectations					
Budget				Increased student engagement in mathematics	
Training Facilities					
Pre/post Reflective survey				Student use models/strategies over time.	
Observations					
Planning meetings			**Measures:** Feedback from trainings	**Measures:** Case study Self-reflective survey observation	**Measures:** Existing District Studies and Data
Debrief meetings			Observations Pre/post reflective surveys		

Assumptions
Differing levels of teacher content knowledge, adoption of new math curriculum, option of attendance through sub-out option or in-service version during non-contract hours

External Factors: Implementation of new math curriculum

Case Study 9: Math Support, A Collaborative Approach

Introduction

The motto for the Churchill County School District highlighted in this case study is *Everyone Always Learning*. This lofty, but attainable goal is accomplished when students and staff are motivated to learn and instruction matches learning needs. This is no small task, as each student and staff member comes with different backgrounds, different interests, and different strengths.

Though similar work was carried out in several schools, this case study identifies collaborative work conducted with 25 elementary teachers at an upper elementary site, with a particular focus on math instruction. The overall goal was to increase teachers' awareness and implementation of best instructional practices and subsequently raise learning and achievement for each student (See Logic Model). This was accomplished through focused professional development including options determined by individual staff members. The facets of this professional development project include personal observations and coaching sessions, peer observations, and modeled lessons. The use of student data to guide instruction played a big role this year for all teachers with the addition of Student Learning Goals as part of the Nevada Educator Performance Framework (NEPF) state evaluation system as well as work conducted in the district to implement instructional interventions to address student needs. (See Logic Model)

Instructional Context:

This work was completed in a rural district serving approximately 3000 students in pre-K through high school. Schools include one public charter school (grades K – high school) and the schools comprising the school district (grades pre-K – high school). District sites include one early learning center for preschool and three grade-level elementary schools for students in grades Kindergarten through five. This district has one middle school for students in grades six through eight, and one four-year high school. The average class size in the elementary grades is 24 and the average class size for secondary schools is 26.

The three district elementary sites are grade-banded with the combination of the following grades: Kindergarten and first, second and third, fourth and fifth. The move to grade level schools provided teachers and students with the wonderful opportunity to meet on a regular basis for specific and relevant professional development, co-planning, and to share resources and ideas. All students have access to one-to-one devices. In elementary grades, K-4, Chromebooks are shared by students in a 1:4 to 1:2 ratio. Beginning in fifth grade and moving through high school, each student has a Chromebook checked out to him or her to use for instructional purposes while in school and at home.

Another way the district strives to meet the demands of effective practice is supported by early release of students at 1:30 every Friday. This sacred time is used primarily for co-planning and discussion around student data, but may include professional development regarding site and district topics.

Initial Data and Planning:

This case study aligns with shifts in instruction presented in the Nevada Academic Content Standards (NVACS) in math and the five high-leverage instructional practices of the NEPF. These research-based strategies include, but are not limited to the use of student discourse, activating and making use of prior knowledge, metacognition, and ongoing formative and summative assessment within mathematics instruction.

While teachers and students are working hard to bolster instruction and learning, achievement scores have been low in mathematics for several years in this district as informed by NWEA Measures of Academic Progress (MAP). At the end of the previous school year (2015-2016), 36% of third grade students and 24% of fourth grade students met the projected proficiency score. Because of this, the site administrator requested support to increase students' math achievement.

The NWRPDP Learning Facilitator used a planning and observation tool, <u>Instructional Practice Guide</u> (IPG), created and published by Student Achievement Partners, that fully incorporates the shifts of the math content standards and correlating instruction to support teachers with lesson planning and delivery for the benefit of student learning. Observations showed that while teachers used grade level standards and the agreed upon curriculum resources for planning and delivering math instruction, lessons often did not include high levels of discourse between and among students or much metacognitive reflection on their learning and understanding.

Delivery of Services
Observations, both announced and unannounced, were conducted with each teacher followed by a coaching session using the IPG as a guide. In addition to the coaching conversations, email was used to continue the conversations and follow-up. After initial observations and conferences, staff training was created to support teachers in using discourse and metacognitive strategies, two highlighted areas of focus determined by low observation occurrence.

The NWRPDP Learning Facilitator met with all teachers to discuss the components of the NEPF Student Learning Goal (SLG) near the end of the first quarter of the school year. The site administrator and the site data team determined that SLGs would be written around math. Teachers at each grade level met to discuss school-wide MAP data gathered during the first quarter of the school year. After thoughtful discussion, including hunches built from teachers' beliefs, student progress, and content knowledge (Jensen 2016) the teachers determined that improving foundational grade level math operations would provide the greatest impact on student learning. Teachers determined learning targets for students in their classes and methods of instruction to help students meet the goals. Discourse and metacognition were two of these learning strategies.

At the beginning of the second semester, the site administrator and learning facilitator discussed progress and planned next steps. Following research that teachers respond best to professional development when provided choice (Bruce and Ross 2008), teachers were given a choice of participating in peer observations with the learning facilitator to view and discuss math instruction. Teachers also could choose to invite the learning facilitator into their classrooms to conduct a model lesson. Discussion followed to analyze lesson delivery and student learning. Classroom observations and coaching conversations continued as well.

Results and Reflection
Teachers appreciated the choices they had in professional development to support increased effectiveness in math instruction. All teachers participated, approximately 25. The learning facilitator observed in all classrooms, taught a model lesson in seven classrooms, and organized and participated with teachers in eight peer observations, all including coaching conversations. Peer observations provided several gains for the staff including identifying teacher leaders and building capacity for strong collaboration. Teacher expertise was honored and mentorships were established that continued until the end of the school year. Observation data showed improvement in teacher facilitation of student

discourse (from 12% in the fall to 75% in the spring), and metacognition (from 16% in the fall to 68% in the spring).

On a post-reflective survey (attached directly after this case study), teachers noted that observing another teacher was very beneficial as was participating in a conversation about the observation (rating 5 out of 5 for those who conducted a peer observation). Teachers reported that being observed during math instruction followed by a coaching session was beneficial as well (rating 4.25 out of 5). Some teachers noted that feedback from observations was the most beneficial aspect of math support this year.

All teachers earned a rating of 3 or above (on a scale of 1-4) from their administrator on their NEPF Student Learning Goals. This high score for all staff shows the emphasis placed on students to learn and practice math operations. Teachers specifically chose this topic of focus, planned ways to increase their teaching effectiveness, and in turn, raised student achievement.

The spring MAP (Measure of Academic Progress) data showed student growth as well. Fourth grade students grew 8.6 RIT points on average and fifth grade students made an average of 7.9 RIT points of growth. These increases from basically the same set of students in grades three and four the previous year brings hope. Instructional shifts are taking place and students are increasing knowledge, understanding, and application of math concepts and skills.

Conclusion

Teachers appreciated having a choice about professional development. Support is best received and has the greatest impact when it is relevant, and includes collaboration and connection to classroom practice (Jacob & McGovern). This research held true for this group of teachers this year. Peer observations built momentum and lots of positive reactions. Conversation between staff members was positive and supportive. The staff seemed to unite and gain more trust in one another. They voiced gratitude for one another and asked lots of questions about instructional design and decisions around meeting student needs.

Model lessons were a reward and a challenge at the same time, taking a good amount of time to prepare and become familiar with students and their learning style and progress. Establishing procedures for smooth and productive lessons added minutes to the lesson delivery. Teachers appreciated seeing facilitation of fluency activities as well as techniques for metacognition, discourse, full engagement, and formative assessment. One teacher noted:

> I am very thankful that (the learning facilitator) came into my classroom to teach a lesson. Many times we are on the go and need a moment to step back and reflect. I was able to observe her strategies, techniques, take some of her practices and reflect. Everyday should be a learning day for us, the teacher and the students. In my mind I always blame myself for how the day went and how it could have been better. I always ask myself, "How can I improve as a teacher?"

The site administrator was very happy about the increased collaboration and rapport built between staff members this year. He requested that all teachers participate in peer observations next school year. The learning facilitator recommends that peer observations be part of a broader initiative including lesson planning discussion and development with small groups of teachers who would then observe and reflect with one another during the school next year

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NWRPDP Case Study 9: <u>Math Support: A Collaborative Approach – Logic Model</u>

Situation: Effective Professional Development Support in mathematics is relevant to the mathematics content as well as instructional practices. Teacher confidence and efficacy in teaching mathematics is generated through multiple forms of collaborative practice and support .

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
Budget for books, subs and other resources

Facilities in Churchill County School District

Partners in NWRPDP and CCSD

NEPF Framework

Instructional Practice Guides and other curriculum resources in math | Trainings on ways to support Students in Making Meaning

Observations using the *Instructional Practice Guides* (Achievement Partners/Great Minds.org)

PLC using math data for intervention design

Peer Observations with Coaching Support

Model Lessons | Teachers (gr 4-5)

Administrator(s) | Increase/Maintain Participation through observations, coaching and model lessons

Increased Knowledge of Effective Practices including Standards of Mathematical Practices and application tasks

Increased Knowledge of and use of student data, NEPF Student Learning Goals

Measures:
Participation in observation and coaching sessions | Change in Instruction based on observations and coaching sessions

Increase in the number of peer observations

Collaborative discussion for effective instruction based on student achievement data

Strong use of interventions designed to meet student needs

Measures:
Observation data on the Instructional Practice Guides
Data from student interventions | Increased use of effective instructional techniques to match the Math Practices i.e.: discourse, perseverance, problem-solving, critical thinking

Increased confidence and efficacy in using district curriculum resources

Meeting the NEPF Student Learning Goals

Measures:
Classroom and School Data;
NEPF Student Learning Goals
Post-Reflective Survey |

Assumptions
- Continued funding
- Positive attitudes and beliefs about instruction based in conceptual understanding, application, discourse
- Positive intention to use the NEPF framework as a way to improve/enhance instruction
- Trust and rapport established and maintained between staff members

External Factors
- Time for workshops observation/coaching sessions, PLCs
- Interest and 'buy in'

Case Study 10: Improving Novice Social Studies Teachers' Effectiveness

Introduction

The Nevada Academic Standards (NVACS, 2010) require social studies teachers to adapt their instructional practices to reflect disciplinary literacy shifts. However, recently hired social studies teachers in the Washoe County School District struggled to shift their teaching to reflect these disciplinary focuses. Many continued to use more traditional "stand and deliver" practices or textbook handouts rather than strategies that incorporate rigorous, collaborative tasks that focus on complex text, encourage rich discussion, and concise writing. Data collected by the district indicated that this is in large part the result of limited exposure to strong pedagogy as pre-service teachers and few opportunities to build confidence through practice during internships and as novice in-service teachers. The goal of this case study was for participants to increase their capacity and confidence as social studies teachers as they learned effective, research-based disciplinary literacy strategies resulting in increased student engagement and achievement. (See Logic Model)

Instructional Context

The 13 teacher participants for this case study teach at 11 schools from the second largest school district in the state of Nevada. Demographics for students enrolled in the district demonstrate there is significant ethnic diversity and percentages of students in special populations including 16% English Learners, 14% IEP students, and 30% eligible for free and reduced lunch. However, demographics can be significantly different at various sites.

The schools included four urban high schools, one suburban high school, three urban middle schools, and three suburban middle schools. A variety of social studies subjects were taught including; American Government, World History, U.S. History, Sixth-Grade Social Studies, and Advanced Placement Comparative Governments. One of the teachers taught social studies in the Gifted and Talented program at a middle school. All of the participants were new to teaching. Twelve of the participants were first-year teachers whose prior classroom experience was completed as pre-service teachers during their internship. One teacher had two years teaching experience.

Initial Data and Planning

In partnership with the district, a nine-month professional learning cohort for first through third year social studies teachers was created. This cohort class fulfilled one of the two courses required by the district for new teachers. The NWRPDP trainer collaborated with three master social studies teachers from the district to develop the learning model. The cohort was designed around the seven core Standards for Professional Learning (Learning Forward, 2011).

At the beginning of the cohort, teachers completed a teacher belief questionnaire to assess their overall level of confidence regarding curriculum development, instruction, and classroom management. The pre-training questionnaire substantiated the findings of the district-led survey and validated the need for this training. Training content was designed to support the findings of these surveys. As a result, participants worked collaboratively within a learning cohort that was deliberately designed to teach and promote research-based strategies aligned to educator performance and student curriculum standards. Professional learning activities helped teachers implement learning from strategies modeled during the cohort and to use data collected to plan, assess, and evaluate the implementation of those strategies in their classroom.

Delivery of Services

Participants first met for an initial overview of the course on August 2, 2016 during the district professional development when they completed a teacher belief questionnaire and engaged in activities to build rapport with one another. Participants then attended eight monthly meetings, a total of eighteen hours, aimed at increasing understanding and effectiveness of instruction in the social studies classroom. Each training emphasized participating in and examining modeled strategies (Table 1) that teachers were expected to replicate in their classrooms. Teachers would return to the following class with student data that was evaluated in groups to determine effectiveness, level of student achievement, and modification necessary. Trainings were often modified to reflect teacher needs indicated in exit tickets and survey questions throughout the year.

Table 1: Concepts and Strategies Modeled in Monthly Trainings

Month	Concepts	Strategies
August	Climate, Management Working with Complex Images	Zoom-In, What's In a Photo, 2 Stars & Wish
September	Vocabulary & Close Read	Metaphor Comparisons, Taboo, Close Read, Annotations, 3-2-1
October	Text Complexity	Text Selection & Analysis
December	Small Group Discussion	Walk the Line, SAC, Discussion Self-Assessment
January	Listening Tasks & DBQ	Listenwise, DBQ Roundabout, CER paragraph
February	Text Analysis & Discussion	Quotation Mingle, QCQ, Save the Last Word
March	Text Analysis & Writing tasks	Sentence Kernels, Fortune Cookie, Argumentative writing tasks, OUT
April	Text Analysis & Discussion	Jigsaw Seminar/Storyboard Synthesis

Additionally, all participants engaged in goal setting activities with the intent of participating in classroom observations and coaching conversations around their individualized instructional goals. Participating in the coaching cycle was voluntary for teachers. Three teachers chose to participate in the coaching cycle. In addition to the coaching cycle opportunity, teachers could participate in peer observations of master teachers throughout the district.   The NWRPDP trainer accompanied teachers and facilitated reflective discussions at the conclusion of peer observations. Five teachers voluntarily participated in peer observations.

Results and Reflection

At the final class in April, teachers completed a retrospective survey. Using a Lickert scale rating of 1 to 5, teachers assessed their knowledge and confidence before and after the cohort trainings on the following eight questions; 1) NVACS, 2) integration of literacy strategies, 3) integration of complex text, 4) pedagogy to engage students, 5) integration of formative assessment, 6) strategies to motivate students, 7) strategies to help student value learning, and 8) integration of questioning and discourse. Results shown below indicate the average gains in the group's capacity and confidence implementing research-based disciplinary literacy strategies (Table 2). A *t-test* was performed and for each question, the after workshop scores were significantly higher than the before workshop scores. This indicates that the training was significantly increasing the knowledge and skills of participants in all areas assessed. While all eight areas indicate statistically significant growth at the .01 level, the greatest area of numerical change, How to structure activities/pedagogy to engage students, was significant at the higher .001 level.

Table 2: Retrospective Survey Results. Scale 1 - 5. (1 = Poor, 5 = Excellent)

Question	Pre-Workshop Average	Post-Workshop Average	Average Change	t score	p value
1. NVACS standards	3.36	4.36	+1.0	3.708	< .01*
2 Integration of literacy strategies	3.27	4.45	+1.18	4.485	< .01*
3. Integration of complex text in social studies	3.36	4.45	+1.09	4.352	< .01*
4. How to structure activities/pedagogy to engage students	3.36	4.36	+1.0	5.244	< .001**
5. Integration of formative assessment strategies	3.18	4.18	+1.0	4.282	< .01*
6. Classroom management strategies to motivate students	3.18	4.18	+1.0	3.708	< .01*
7. Classroom management strategies to help student learning	3.18	4.09	+0.91	4.303	< .01*
8. Integration of questioning and discourse in social studies	3.18	4.27	+1.09	3.464	< .01*

n = 13; significance level *.01 and **.001.

Teachers were also encouraged to provide reflective comments on their participation in the cohort. Below are several of the comments in response to the following question: What did you like best about this year's training?

- It was very engaging and gave great repeatable daily activities.
- There were many chances to plan lessons and I liked the modeled lessons.
- It reinforced knowledge and had us collaborate effectively.
- The teachers were amazing, so supportive.
- I learned techniques that I have already started to implement into my own teaching.
- This class is so well structured … I'm excited to be here! Thank you!

Teachers also provided constructive feedback to improve the training. Several teachers indicated that the location and day of the week selected for the trainings were difficult to accommodate. Two teachers mentioned the desire to have more time to work together to develop lesson plans to implement the strategies. As a result, trainers will consider a more central location and the possibility of working in structured curriculum planning time.

In addition to the retrospective survey, participants completed the standard NWRPDP end of training evaluation. Using a Lickert scale rating of 1 to 5, teachers evaluated the characteristics of the trainings (Table 3). Ratings revealed that teachers highly rated the training activities, with the lowest rated activities over 4.5 and almost half of the activities were at 4.91 on a 5-point scale. In particular, participants indicated that they would use the knowledge and skills from this activity in their classroom or professional duties (4.91).

Table 3. NWRPDP Training Evaluation Averages. Scale 1 - 5. (1 = Not at all, 5 = To a great extent)

Characteristics of Activity	Average Rating
1. The activity matched my needs.	4.73
2. The activity provided opportunities for interactions and reflections.	4.82
3. The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.91
4. The presenter/facilitator efficiently managed time and pacing of activities.	4.91
5. The presenter/facilitator modeled effective teaching strategies.	4.91
6. This activity added to my knowledge of standards and/or subject matter content.	4.55
7. The activity will improve my teaching skills.	4.73
8. I will use the knowledge and skills from this activity in my classroom or professional duties.	4.91
9. This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special ed., at-risk students).	4.73

Finally, participants who participated in the peer observations also completed the standard NWRPDP end of training evaluation to provide feedback on their observation experience. The results from those participants demonstrated that the peer observation experience was very well received. All participants indicated that the experience provided would help improve their teaching and that they would use the knowledge and skills they gained in their classrooms (Table 4).

Table 4. NWRPDP Training Evaluation Averages. Scale 1 - 5. (1 = Not at all, 5 = To a great extent)

Characteristics of Activity	Average Rating
1. The activity matched my needs.	4.6
2. The activity provided opportunities for interactions and reflections.	5
3. The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.8
4. The presenter/facilitator efficiently managed time and pacing of activities.	5
5. The presenter/facilitator modeled effective teaching strategies.	4.8
6. This activity added to my knowledge of standards and/or subject matter content.	4.8
7. The activity will improve my teaching skills.	5
8. I will use the knowledge and skills from his activity in my classroom or professional duties.	5
9. This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special ed., at-risk students).	4.6

Conclusion

It is imperative that novice social studies teachers have significant opportunity to examine and practice implementing research-based disciplinary literacy strategies in order to increase student achievement. This class provided valuable exposure, practice, and evaluation of numerous strategies that improved

teacher confidence and effectiveness. One participant indicated, "I wish I had this class at the university." By creating a collaborative cohort, led by experienced master teachers, new teachers were able to learn and take risks trying new strategies in a safe and supportive environment. One teacher commented that, "watching experienced teachers helped me realize many things about how to implement the same strategies." Due to the success of this course, the school district will be offering it again next year. Additionally, the district is exploring designing similar content specific novice teacher courses for other core subject areas.

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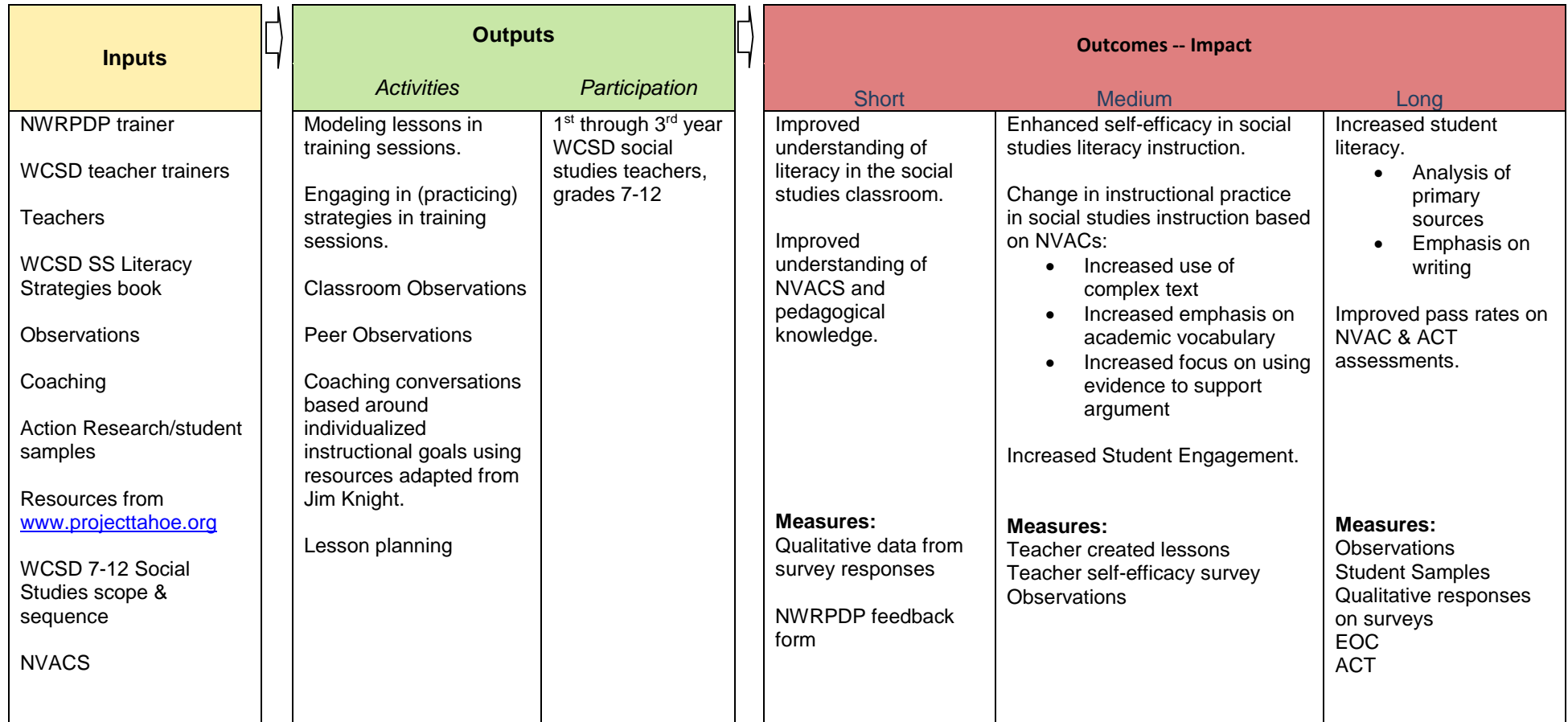Standards for Professional Learning. (n.d.). Retrieved February 27, 2017, from https://learningforward.org/standards-for-professional-learning

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NWRPDP Case Study 10: Improving Novice Social Studies Teachers' Effectiveness Cohort - Logic Model

Situation: Novice social studies teachers in the Washoe County School District need training in implementation of the NVACs and specific disciplinary literacy strategies to increase their self-efficacy and effectiveness in improving student achievement.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
NWRPDP trainer WCSD teacher trainers Teachers WCSD SS Literacy Strategies book Observations Coaching Action Research/student samples Resources from www.projecttahoe.org WCSD 7-12 Social Studies scope & sequence NVACS	Modeling lessons in training sessions. Engaging in (practicing) strategies in training sessions. Classroom Observations Peer Observations Coaching conversations based around individualized instructional goals using resources adapted from Jim Knight. Lesson planning	1st through 3rd year WCSD social studies teachers, grades 7-12	Improved understanding of literacy in the social studies classroom. Improved understanding of NVACS and pedagogical knowledge. **Measures:** Qualitative data from survey responses NWRPDP feedback form	Enhanced self-efficacy in social studies literacy instruction. Change in instructional practice in social studies instruction based on NVACs: • Increased use of complex text • Increased emphasis on academic vocabulary • Increased focus on using evidence to support argument Increased Student Engagement. **Measures:** Teacher created lessons Teacher self-efficacy survey Observations	Increased student literacy. • Analysis of primary sources • Emphasis on writing Improved pass rates on NVAC & ACT assessments. **Measures:** Observations Student Samples Qualitative responses on surveys EOC ACT

Assumptions
- Increased training in NVACS & SS literacy strategies will lead to increased self-efficacy.
- All new SS hires will choose to participate in the cohort as one of two options for new teacher training.
- Increased use of literacy strategies leads to increased student engagement and improved performance on NVAC assessments.

External Factors
District Resources
Time for coaching sessions

Case Study 11: Increasing Family Engagement

Introduction

There is no question that parent and family involvement has a profound influence on children's school success, yet school improvement and reform efforts to date have focused almost entirely on what happens in school buildings and on what school staff can do. It is time to get serious about enlisting parents in the education of their children and putting their research-proven potential to work as a team with your staff to improve learning and student achievement.

John H. Wherry, Ed.D. President, The Parent Institute, 2017

There is no doubt that families play a major role in the education of their children. As educators and school systems, increasing Family Engagement is key to providing a comprehensive educational and developmental package for children. The focus of this study is on the impact of regular, targeted literacy instruction for parents within the classroom community setting. Teacher and parent perception of family engagement at the school as well as family efficacy in literacy instruction will be included. Three rural primary schools and 68 teachers were involved in learning the newly adopted Parent Involvement – Family Engagement (PIFE) standards and implementing Family Literacy materials which were developed in conjunction with the University of Nevada Cooperative Extension Office (Striving Reader Tip Sheets and Family Storyteller). (See Logic Model)

Instructional Context

This case study was conducted in a frontier county in Northwest Nevada in three primary schools serving approximately 1,150 PreK-3rd grade students. Community demographics for recent years show that the population is comprised of approximately 62.61% white only, 1.55% Black/African American, 5.82% American Indian, 2.61% Asian/Pacific Islander, 20.96% Hispanic, and 6.45% Mixed races. In 8.11% of households, English is not the predominant language spoken at home and 48.45% of the student population is eligible for free and reduced lunch (nevadareportcard.com). All three schools are Title I served schools and ethnically have populations that are representative of populations in the greater community. Students in Pre-K attend school for 5 hours per day with breakfast and lunch served at the school. Children in Kindergarten through third grade attend school for seven hours per day with both breakfast and lunch served.

The teachers participating in this study all served PreK-3rd grade students. They had varied teaching and training experiences. There were nine Pre-K (1 was an English Learner classroom), eleven Kindergarten, eleven 1st grade, eleven 2nd grade, twelve 3rd grade, two English Learner (EL) teachers (1 served K/1, 1 served 2/3) and 13 special education teachers (6 served K/1). The teachers' experience varied from teachers with less than one year experience to teachers with up to 27 years teaching experience. District initiatives have provided Sheltered Instruction Observation Protocol (SIOP) training. Additionally, teachers were provided scheduled collaboration time through the provision of a weekly early release day for students. This provision of collaboration time is tasked with data analysis, professional development, or meetings to inform, improve, and differentiate instruction. All K-3 students participate in a common "Walk-to-Read" time that allows for targeted reading interventions. Summer school is provided to a limited group of students with reading deficiencies.

The English Learner Policy in this district required the maintenance of a positive climate and culture that

provides for safe, secure, and nurturing learning environments; rigorous, explicit, high-quality language instruction; data-driven accountability; and opportunities for parent communication, advisory, and activities.

Furthermore, the Nevada State Literacy Plan (NSLP) is a proponent for early childhood literacy leaders to support children's emerging literacy development from birth through grade 3 in part by "involving families with their children in learning activities at home," (NSLP, 2015, p. 91).

Lastly, the District Performance Plan for these three schools states that the district will develop and utilize professional development programs that support and improve student growth and achievement. Professional development regarding the Parent Involvement/Family Engagement Standards and Family Literacy will provide teachers with instruction and guidance to improve student growth and achievement by increasing the effective interactions between school and home and within families in their homes.

Initial Data and Planning
In completing the Action Plan for the District Literacy Plan, this district scored themselves as a 1 in the Family and Community Engagement Essential. In addition, required Read by Grade 3 testing determined a significant number of students to have deficiencies in reading for the 2016-2017 school year (K-69%, 1-69%, 2-78%, 3-68% Site Action Plans). In order to effect positive changes in literacy instruction, one district goal was to improve Family Engagement and opportunities for literacy support at home with all students.

This Case Study was designed to assess the effect of increasing family participation and perception of student education both at home and at school, especially in terms of literacy. All 68 teachers included will attend a 90 minute instructional session to introduce the PIFE standards and the Family Literacy curriculum and to evaluate their personal understanding, implementation, and growth regarding Family Engagement. A school-wide plan for the following year will be designed upon completion of the entirety of coursework for the teachers.

All teacher participants will host six Family Literacy Events. Teachers will have the opportunity to participate in an additional 90 minute instructional block and six additional assignments that deepen their knowledge and application of the PIFE standards within their classroom practice. All PreK-3rd teachers completing the initial requirements will attain .5 NDE credit with teachers who complete the additional offered professional learning experiences will earn 1 credit. All participants will complete feedback surveys for pre/post data. Additionally, parent attendance and survey data will be collected that measures number of parents who attend and parent perception of the school, teachers, and Literacy instruction received at the school.

Delivery of Services
Services for teachers and administrators occurred with a portion of the opportunities as mandatory and a portion as optional. There were 68 teachers and three administrators included in this project. All teachers and administrators attended a 90 minute instructional session to introduce the PIFE standards and the Family Literacy curriculum and to evaluate their personal understanding, implementation, and growth regarding Family Engagement. All three schools required six school-wide Family Literacy Nights with a portion of these nights committed to increasing family knowledge of literacy development for children and to place literacy materials in parents' hands.

The 90 minute coursework required had the following goals: Teachers will access the PIFE (Parent Involvement/Family Engagement) Standards, the NSLP (Nevada State Literacy Plan) and the Striving Readers Videos and Tip sheets (jointly developed through Striving Readers and the UNR Cooperative Extension Office) to understand and evaluate current implementation of the PIFE standards, to host six effective Family Literacy sessions in their individual classrooms, and to increase their participation and efficacy when working in conjunction with families. Expected outcomes were that teachers would deepen their understanding of the PIFE standards, increase the amount and effectiveness of interactions with families, especially with regard to literacy, and deepen teacher reflections around their current and future practice.

Teachers had the opportunity to deepen their learning through participation in additional coursework around these six literacy events in their classrooms. Participants were able to choose to attend an additional 90 minute session with the goal of self-assessing growth in application of the PIFE standards and include the creation of a school-wide and personal professional growth plan in regards to the PIFE standards. These teachers also engaged in six individualized assignments that reflected on each of the six PIFE standards. These assignments were completed independently through a Google Classroom. Full completion of the assignments (which require reading, analytical tasks, reflection, and response) was required. These sessions culminated with an action plan for teachers. Surveys and reflections were a component of this project as were a set of Family Surveys given to parents at the completion of each of the six nights.

Results and Reflection

Sixty-eight teachers and three administrators at three sites began the implementation of this case study by completing the 90 minutes of initial coursework. This number represented all licensed staff at the three sites. Of the 68 teachers who began the endeavor 59 teachers (89%) completed all of the mandatory requirements of initial training and hosting six family literacy events. Two of three (67%) administrators fully participated. Furthermore, 19 (29%) teachers and 1 (33%) administrator participated in the additional opportunities for professional learning. These teachers represented 17% of PreK teachers, 45% of K and 1st grade teachers and 14% of 2nd and 3rd grade teachers. One administrator implemented the Family Survey portion of the program to provide family impact and perception data.

To measure the increase in teacher knowledge of the PIFE standards, a post reflective survey was sent out to the participants. Data was collected to determine knowledge of standards, implementation levels of standards, and confidence in implementing standards. Teachers rated themselves on a Likert scale 1-5 with 1 representing "minimal knowledge" and a 5 representing "completely understood and implemented." Data are shown in the tables below (Tables 1-3). Teachers also were asked to reflect on changes in their knowledge, beliefs, and provision of opportunities through written comments. Teachers commented:
- Before this course I felt that Family Engagement meant that families should be working on school work at home. I now feel that Family Engagement means we work to help educate parents on how to work with their children, by providing more opportunities throughout the year for parents and teachers to come together.
- Before this course, I felt Family Engagement should be parents joining PTO, coming to school functions, (and) coming to parent teacher conferences. Now I feel we are on the right path by providing more opportunities for parents to collaborate with teachers by hosting literacy nights. These nights show parents how important we feel their involvement with their child's education is. I think it also helps parents to become more comfortable coming into the school (more inviting) not just a place where they drop kids off and pick them up at the end of the day.

- This year, we have had much, much more opportunities for our parents. We have had Winter Fest, Bingo, Halloween Night, Book Fair, and all of the six Family Literacy Nights where we taught our parents different strategies to use with their children to help them become readers or better readers. We also gave them activities to take home so that they could try the activities with their children. Within my own classroom, I have continued to have parent helpers. I have one parent who comes in to help practice and test sight words every week. I have one grandparent who also helps practice and test sight words. I have another grandparent who comes in twice a week to do a math center during reading group/center time to review what we have been working on each week. I also have a parent who cannot come in but wants to help out, so she makes our copies, laminates and makes activities if needed.
- I would like to see all the parents fill out a survey with the areas they would like to learn about... Then develop 30 minute activities for them to come in and do with their students before, during, or after school.

Table 1. Knowledge of the Nevada Parent Involvement Family Engagement Standards (n = 59)

	1- minimal knowledge	2	3	4	5- completely understood/ implemented	Mean
Before	6	9	8	2	1	2.35
After	0	0	6	17	3	3.88

A t-test indicates that scores of knowledge increased significantly, pre to post test (t = 6.49, p < .001).

Table 2. Teacher Implementation of Parent Involvement Family Engagement Standards (n = 59)

	1- minimal knowledge	2	3	4	5- completely understood/ implemented	Mean
Before	5	8	12	1	0	2.35
After	0	1	6	18	1	3.73

A t-test indicates scores increased significantly, pre to post test (t = 6.79, p < .001).

Table 3. Confidence in implementing the Nevada Parent Involvement Family Engagement Standards (n = 59)

	1- minimal knowledge	2	3	4	5- completely understood/ implemented	Mean
Before	3	11	9	3	0	2.46
After	0	1	7	13	5	3.85

A t-test indicates that scores improved significantly, pre to post test (t = 6.07, p < .001).

As part of this study, teachers analyzed and reflected upon current implementation of the Family Engagement standards and were asked to create a Family Engagement goal. Teacher data show 30% of teachers set a goal around Communicating Effectively, 25% in Collaborating with Community, 20% in Welcoming all Families into the School Community, 15% in Sharing Power and 10% in Supporting Student Well-being and Academic Success. Teachers wrote specific, measurable, achievable, relevant, and time-bound goals with action steps and listed specific resources needed to accomplish these goals. They determined success measures and created a plan to meet these goals. These plans were powerful for teachers and will likely represent continued increases in implementation of the PIFE standards and effect positive relationships with families and help improve/increase student outcomes.

As part of this study, family perception data was collected. Surveys were given monthly with seven questions that were measured on a Likert scale. Three open ended questions were given as well. Approximately one in three parents with survey responses were able to attend at least four of the six events. The data shown for these questions represents the families that were able to attend at least four sessions. Parent data showed parents felt welcomed at their school, felt informed of their student's progress, and felt they were given adequate resources to help their child. Significant change in parent perception did not occur during the study, but the 60 parents who attended four or more sessions had a positive perception of their school.
The questions asked were specifically chosen to be used as a temperature gauge for all six of the PIFE standards. This specific project was directed at making sure families felt welcome in the schools, increasing parent communication, providing parent resources in literacy, and creating partnerships.

Families were asked what they would like to see available at the school to make family engagement better. Some feedback for the schools was that parents wanted a suggestion box, a frequently updated school website, an educational website to use at home, more family nights with more "packets", and larger numbers of parents to attend. When asked how the school could improve, suggestions were that the school encourage more participation in the classroom and more electronic communication such as more email and web- or app-based communication opportunities. When asked, "How would today's work would be more valuable to your families?", parents responded that they would like more differentiation in the activities demonstrated as well as more practice time with the activities and more information on knowing how to help their children.

While the outcomes of this case study cannot be directly linked to student achievement outcomes, the instruction for teachers in the area of informing parents of student literacy development, the instruction for parents on student literacy development, and the provision of literacy materials for families to use at home may have had an impact on student achievement. Table 4 displays the change in the percent of students reaching district-set targets in literacy for K-3 students, based on the Measure of Academic Progress (MAP), from fall 2016 to spring 2017. An increase in the percent of students meeting district-set targets in reading was identified in grades 1-3.

Table 4. Percent of Students Meeting District-set MAP Targets in Reading by Grade Level

	K	1	2	3
Fall	31	31	28	32
Spring	26	35	35	38

Conclusion

The results largely support the importance of embedded professional learning opportunities that span a longer term, implementation and reflection throughout the workshops, as well as a change in beliefs and practices. Teachers engaged in 7.5 to 15 hours of professional learning with job embedded experiences, analytical and reflective assignments and expectations, and goal setting around the topic of Family Engagement. There was in increase in teacher knowledge, practice, and efficacy regarding Family Engagement. Teachers felt that this professional learning opportunity afforded them not only knowledge and "new innovative ideas," but also more opportunity to get to know their families. Teachers also appreciated the opportunity to collaborate with both families and teachers to improve family engagement at their sites. A specific positive outcome of this case study is the result in both belief and practice change for teachers. Teachers who participated in the extended learning opportunities not only embraced the PIFE standards, but built professional learning opportunities and collaborative opportunities to change practice. This group has already planned and determined the what and how to obtain materials for the upcoming school year. In addition, teachers identified barriers and are collaborating to overcome these barriers. An area of concern for teachers was not being able to reach all parents, especially parents of many students in risk categories. "I just wished we had a way to get the parents who are in most need to attend. I keep racking my brain with ideas and I can't seem to come up with the magic bullet that is needed to reach these families that would most benefit," said one teacher. In fact, the largest turnout for any site was 20% of parents with only 12% of parents attending four or more sessions.

While the sample size for parents was much smaller and harder to quantify, parent data showed increases in three of the six perceptional categories. This would be an area to more closely study and analyze in the future. Parents, by their comments, became better able to articulate their literacy needs for their families, which demonstrates in increase in efficacy.
Their comments also demonstrated their desire to partner with the school and to learn more.

Student outcomes increased in the area of literacy (which was a focus of the family engagement study for the year). While direct correlation cannot be determined here, studies indicate that empowering and equipping parents with tools and materials to increase their children's literacy skills would impact student achievement outcomes. Lastly, this study brought teachers together collaboratively to create school-wide initiatives and goals to increase Family Engagement at their sites. This collaborative and comprehensive approach builds a culture at a school that is more welcoming and builds leadership and capacity among teachers.

The biggest success in the Family Engagement Case Study was the effect on sustainability within two of the three school sites. At both of the school sites where the administrator participated in the professional learning opportunity, teacher teams have taken on a leadership role to design, plan, and acquire materials to continue the Family Literacy Project for the next school year. The programs look different at the different sites, representing the culturally responsive nature of designing events for the culture and community of each school. Each of these two schools has an effective Family Literacy Plan for the 2017-18 school year with dates on the school district calendar.

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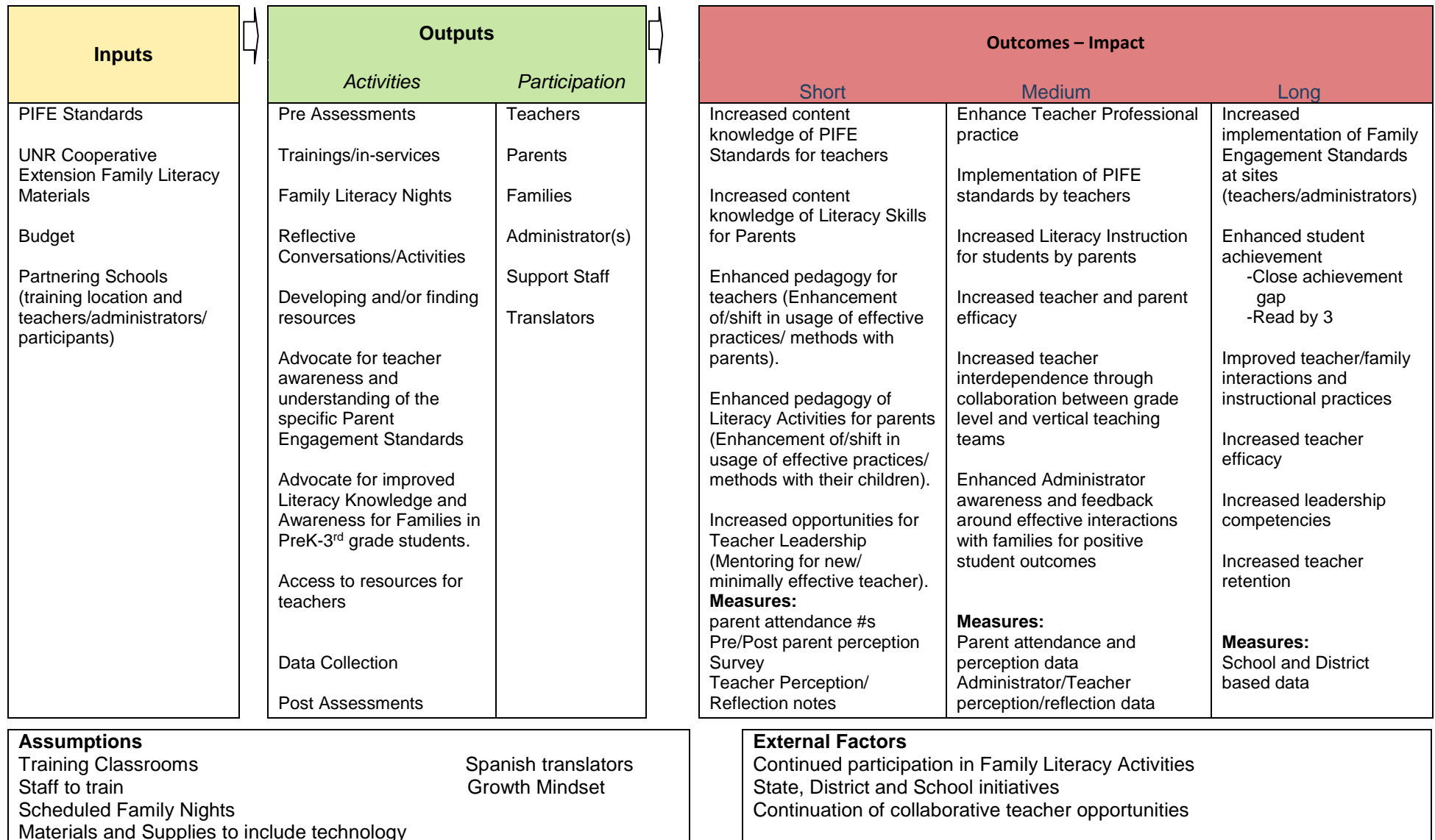**Striving Readers Comprehensive Literacy: Washoe County School District**
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NWRPDP Case Study 11: <u>Family Literacy: Improving Family Engagement and Parent Efficacy – Logic Model</u>

Situation: Family Engagement and Efficacy are critical indicators in student achievement and outcomes. Engaging teachers in professional development around the Family Engagement Standards and effective Parent Literacy materials as well as engaging parents and teachers in collaborative literacy sessions will increase teacher/family interactions and interdependence, parent efficacy in literacy development/instruction, and teacher interdependence and leadership.

Inputs	Outputs		Outcomes – Impact		
	Activities	*Participation*	Short	Medium	Long

PIFE Standards
 	
UNR Cooperative Extension Family Literacy Materials
 	
Budget
 	
Partnering Schools (training location and teachers/administrators/ participants)
	Pre Assessments
	
	Trainings/in-services
	
	Family Literacy Nights
	
	Reflective Conversations/Activities
	
	Developing and/or finding resources
	
	Advocate for teacher awareness and understanding of the specific Parent Engagement Standards
	
	Advocate for improved Literacy Knowledge and Awareness for Families in PreK-3rd grade students.
	
	Access to resources for teachers
	
	Data Collection
	
	Post Assessments
		Teachers
		
		Parents
		
		Families
		
		Administrator(s)
		
		Support Staff
		
		Translators
			Increased content knowledge of PIFE Standards for teachers
			
			Increased content knowledge of Literacy Skills for Parents
			
			Enhanced pedagogy for teachers (Enhancement of/shift in usage of effective practices/ methods with parents).
			
			Enhanced pedagogy of Literacy Activities for parents (Enhancement of/shift in usage of effective practices/ methods with their children).
			
			Increased opportunities for Teacher Leadership (Mentoring for new/ minimally effective teacher).
			Measures:
			parent attendance #s
			Pre/Post parent perception Survey
			Teacher Perception/ Reflection notes
				Enhance Teacher Professional practice
				
				Implementation of PIFE standards by teachers
				
				Increased Literacy Instruction for students by parents
				
				Increased teacher and parent efficacy
				
				Increased teacher interdependence through collaboration between grade level and vertical teaching teams
				
				Enhanced Administrator awareness and feedback around effective interactions with families for positive student outcomes
				
				Measures:
				Parent attendance and perception data
				Administrator/Teacher perception/reflection data
					Increased implementation of Family Engagement Standards at sites (teachers/administrators)
					
					Enhanced student achievement
					   -Close achievement gap
					   -Read by 3
					
					Improved teacher/family interactions and instructional practices
					
					Increased teacher efficacy
					
					Increased leadership competencies
					
					Increased teacher retention
					
					Measures:
					School and District based data

Assumptions		**External Factors**
Training Classrooms Staff to train Scheduled Family Nights Materials and Supplies to include technology	Spanish translators Growth Mindset	Continued participation in Family Literacy Activities State, District and School initiatives Continuation of collaborative teacher opportunities

Case Study 12 – Leading Collaborative Teams

Introduction

Teacher leaders play an important role in improving student achievement. This occurs not just in classrooms but also by supporting the effectiveness of collaborative teams by facilitating inquiry, building capacity for reflection and collaborative skills for themselves and others, and building a culture of openness and trust. According to the Standards for Professional Learning (Learning Forward, 2011), committed educators understand that they must engage in continuous improvement to know enough and be skilled enough to meet the learning needs of all students. The Leading Collaborative Teams training was developed to support the development of these skills for educators.

Instructional Context

Leading Collaborative Teams was a one credit Nevada Department of Education approved course that met bi-weekly after school for three hours. It was offered to administrators, teacher leaders, and teachers in the second largest school district in Nevada which serves nearly 64,000 students. Seventeen participants enrolled in this course through the district's professional learning management system. Participants included fifteen teachers and instructional coaches as well as one administrator and one counselor.

Initial Data and Planning

Leading Collaborative Teams was designed after a cross-department needs assessment queried the professional learning needs of teacher leaders regarding working in productive teams to impact teaching and learning. In this course, participants explored how to support and develop collaborative groups to be more effective, efficient, and productive in serving students. Participants investigated the practices and premises that build the capacity of the group as a whole as well as the individual members. Practices and premises included practical strategies for focusing attention, processing information, and building relationships. When groups are engaged in safe and supportive working structures they develop awareness of their own habits that contribute to the success of the group and the skills of others (Lipton & Wellman, 2011).

The course was presented by three facilitators as part of a collaboration among departments: Nevada's Northwest Regional Professional Development Program, the district Department of Professional Learning, and Professional Growth Systems. Leading Collaborative Teams course design was aligned to the Standards of Professional Learning (Learning Forward, 2011), the district's strategic plan goal of developing and retaining highly effective personnel to support students and their academic success, and the Teacher Leader Competencies - *Reflective Practice, Personal Effectiveness, Interpersonal Effectiveness, and Group Processes* (2014). As part of this alignment, the learning intentions were identified as follows:

- Develop collaborative skills for self and others
- Understand and apply the premises and practices for leading groups
- Purposefully use structures and strategies that support group development
- Strategically employ the norms of collaboration

Delivery of Services
Leading Collaborative Teams consisted of five sessions over a 10-week period where participants engaged as a learning team during course delivery and practiced implementing strategies and structures in context with teams between meetings. The three course facilitators modeled a collaborative team structure through the intentional grouping of participants to model engaging in the professional learning, reflecting on the application of their learning, and planning for implementation with their teams.

Funding from the Northwest Regional Professional Development program provided each participant with a copy of *Groups at Work* which framed the course design. Participants received their books at the first session and identified a focus team for the practical application of their learning. During each session participants learned about the practices and premises for leading effective groups, engaged in structures and strategies included in *Groups at Work*, and reflected on the implementation of those strategies within their own collaborative teams.

Data collection included using the Group Development Rubric (Lipton & Wellman, 2004) where participants rated their teams after the first session and once again during the final session (Table 1). Participants completed a questionnaire at the end of the third session (Table 2). A course evaluation was given to participants after the final session, and they were also emailed an implementation survey 45 days after the course completion (Table 3).

Results and Reflection
To model the process of group development by looking at the group's attention to task, process, and relationship when considering how groups function, participants were given the Group Development Rubric (Lipton & Wellman, 2004) as a tool to assess the teams they worked with when implementing the strategies and structures learned in the course. The rubric includes 27 points for analyses; nine criteria each for assessing attention to task, attention to process, and attention to relationship. The rubric uses four criteria for analyzing the development of a group: unaware, conscious incompetence, with conscious competency, and flexibly and fluently (Lipton & Wellman, 2004). Values 1-4 were attributed to each of the criteria to score the analysis: 1- unaware, 2- conscious incompetence, 3 – with conscious competency, and 4 – flexibly and fluently. Table 1 shows a comparison of group development from the first session to the final session. The nine indicators for each category were averaged together. The final column shows gains in every category with the highest gain in Attention to Relationship (1.89).

Table 1: Group Development Rubric Analysis

Category	Session 1 (pre)	Session 5 (post)	Gain
Attention to Task	10.58	12.11	+1.53
Attention to Process	11.08	11.94	+0.86
Attention to Relationship	10.11	12.0	+1.89

The gains in attention to relationship indicators was most indicative of the participants reflecting on the ability of their group members to actively question and explore individual and collective teaching practices to calibrate them against clear and agreed upon standards (Lipton & Wellman, 2004). After reviewing the rubric results from the first session, trainers put emphasis on the relationship of the group as a whole and the individuals within the group. This emphasis was critical to moving groups toward more productive work in improving teaching and learning. Several protocols were shared with

participants to facilitate self-reflection of group members, build on the strengths of individuals within the group, and conduct data-driven conversations with the intent of improving student outcomes through instructional practices.

During the third session, participants were given a questionnaire to assess the level of their understanding of the identified learning intentions of the course and implementation expectations. They were asked to use a Likert scale with 1 being "not at all," 3 being "somewhat," and 5 being "very well." Table 2 displays the average score for each statement, before and after the workshop series. Gains were reported in every category, with the largest gain in Purposefully Using Strategies and Structures that Support Group Development (1.16).

Table 2: Mid-Course Questionnaire

Statement	How well had you implemented <u>before</u> participating in Leading Collaborative Teams?	How well would you say you are engaging each of the following <u>now</u>?	Gain
Developing collaborative skills for self	3.28	3.94	+0.66
Developing collaborative skills for others	2.72	3.44	+1.11
Understanding the premises and practices for leading groups	2.33	3.33	+1.0
Applying the premises and practices for leading groups	1.94	3.06	+1.12
Purposefully using strategies and structures that support group development	2.28	3.44	+1.16
Strategically employing the norms of collaboration	2.61	3.61	+1.0

As a part of the questionnaire, participants were asked to identify some "ah-has," new understandings, or skills they could attribute to participation in Leading Collaborative Teams. Some of the responses appear below.

- *The purpose of using structures for participation has really been an area where my understanding has expanded.*
- *When working with a collaborative team it is important to ensure everyone is open and understanding of individual differences. Also creating norms is essential to creating an environment of mutual respect.*
- *My "ah=ha" is that the use of protocols can change the behavior of the group.*
- *Premise #1 is very powerful and has helped change my own mindset that all groups can be influenced positively.*

The information collected from the questionnaire informed the course content for the final two sessions including additional time spent focusing on the norms of collaboration. The trainers used the questionnaire to reflect on the course content and needs of the participants in relation to the intended learning outcomes.

As part of the final course evaluation, participants were asked: *What are the strengths of this session?* Bulleted below are some of the responses.

- *Loved the way the reading and premises allowed me to explore the Groups at Work book. Hands on is always the best way to take in info for me!*
- *The sessions offered plenty of time to collaborate, reflect and share with other participants. Thank you for all the wonderful and informative articles and fiving us a time to read and process them. Love the book, have already used several strategies!*
- *This was a topic I've never learned about before, so I found it very interesting and gave me a new perspective regarding collaboration and the importance of PLC communities.*
- *Wow! This has been an outstanding learning opportunity. The expanded timing (every two weeks) allowed for more application of techniques with an identified group. Presenters were very skilled in adult learning. It was fabulous to see pieces of how that group (the 3 presenters) functioned as a learning, adaptive group. I also appreciated an assignment to a group of colleagues – although I balked at it some, a solid group to discuss and share progress with allowed for deeper discussion than random brand new relationships would allow for. I am recommending this course to lots of leaders.*

Participants were emailed a link to an implementation survey 45 days after completion of the course. Of the 17 participants who completed the course, 12 participants responded to the survey. The highest percent of usage was reported as Build My Own Capacity. All participants reported the impact on teaching and/or learning to be at a medium (75%) or a high degree (25%).

Table 3: Implementation Survey Results

How did you implement the content that you learned from this course?		To what degree did implementation impact teaching and/or learning?	
Build my own capacity	42%	High Degree	25%
Share with my PLC	31%	Medium Degree	75%
Shared with my administrator or leadership team	12%	Low Degree	0%
Conducted a presentation using that content	15%	Not at all	0%

Participants were also asked to reflect in writing on how their implementation impacted teaching and/or learning. Bulleted below are some of their responses:

- *By building my own capacity to lead professional learning, teaching and learning in classrooms will be indirectly impacted as my skills improve.*
- *I am using the strategies in PLCs and I have highly recommended this class to others!!!*
- *I've used several of the text processing structures with the teachers in my in-service class. The structures have allowed for different and deeper processing than would have occurred without. Two of the teachers have used the Focused Reading Structure with their classes.*

- *Many of the strategies that I learned in this class were implemented in two separate PLs. They were then discussed as to how we can modify them to suit the needs of our students, and in turn (with slight modifications) were implemented into several classrooms at our school.*
- *This course helped me when I work with teachers during PLCs. I was able to use the protocols to help the teams dig deeper into their planning.*

Conclusion

Leading Collaborative Teams has been included as a recommended course for participants seeking teacher leader opportunities within the district it was offered. One participant suggested extending the course to a year-long professional learning sequence to allow participants an opportunity to engage in a continuous improvement cycle. Next steps include capacity building support to train additional facilitators on the course content and expand the professional learning to other educators across the districts served by the Northwest Regional Professional Development Program.

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RPDP Case Study: Leading Collaborative Teams - Logic Model

Situation: Participants will develop skills and knowledge in how to support collaborative groups to be more effective, efficient, and productive in serving teachers and students.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	Short	Medium	Long
• Staff • Budget • Partnerships (Dept. of Professional Learning & Professional Growth Systems) • Resources	• Determine scope and sequence of professional learning • Submit syllabus to ATLAS committee for review • Input course on PLMS system after approval through proper channels • Identify points for data collection throughout course	• Invite teacher leaders, teachers and administrators to register for the course	• Increase of the development of collaborative skills for participants and members of their teams • Increase in understanding the application of practices and premises for leading collaborative teams Measures: Group Development Rubric, mid-course questionnaire	• Increase in the purposeful use of the strategies and structures that support group development • Increase in the strategic use of the norms of collaboration Measures: Evaluations, Implementation Survey	• Increased capacity of educators to lead effective collaborative teams. Measures: Leading Collaborative Teams in-service course offered twice during the 2017-2018 school year. Additional facilitator trained to deliver course content to other districts.

Assumptions
This course requires participants to implement the professional learning with a collaborative team of their choosing. It is assumed that all participants will commit to practical application of the structures and strategies shared with their team.

External Factors
Participation/interest in a climate of "initiative fatigue" and during "testing season" are considerations and factors impacting participation in this course.

Case Study 13: Teacher Leadership Cohort

Introduction

Nevada continues to have significant issues with the recruitment and retention of effective teachers. Research shows that this growing tension has multiple contributing factors, such as insufficient pre-service programs, assessment and accountability concerns, and the lack of career lattice systems that support teacher growth. This concern is not just a Nevada issue. Enrollment in pre-service teacher programs has dropped 10% nationally, over 50% in California, and state colleges in Nevada report a 30% decrease in College of Education pre-service programs (Sawchuck, 2014) over the past few years. A national conversation regarding re-professionalizing the teaching profession has launched a number of different efforts including revisions of licensing requirements, extended internships, and career lattice options for Teacher Leadership (Thorpe, 2014). Teacher Leadership has been loosely defined as educators that lead within and beyond the classroom, influencing others toward improved educational practice, and accepting responsibility for achieving the outcomes of their leadership (Katzenmeyer & Moller, 2001). (See Logic Model)

Instructional Context

The professional learning featured in this case study is from the Teachers Leading Change Cohort (TLC, formerly known as the Nevada Network of Teacher Leaders). This two-year cohort was launched in August, 2016, with 25 teachers from one mid-sized school district with the intent of building the Teacher Leadership competencies of participants that they may enhance the instructional practice of their colleagues. This is the second cohort of this professional learning series; the first cohort of 23 teachers is now in their second year. Participants in this professional learning represent a wide array of educational settings: K-12th grade, core content, SPED, ELL support, and online learning. A variety of different types of schools are also represented from low-SES and low performing schools to high-SES and high performing sites. These demographically diverse groups of educators are also employed in a variety of different teaching contexts; classroom teachers, Teacher Incentive Fund (TIF) master/mentors teachers, data coaches, and instructional coaches with experience ranging from 8 years of teaching to 21 years in the classroom. With all these factors in mind, the curriculum design team ensured that all participants had multiple opportunities to engage in learning that supported application within their own context, experience, and professional capacity.

The curriculum of this class has a broad scope and sequence ranging from leadership styles, leading during times of change, developing one's own mission and vision to mentoring, observation, feedback, and coaching. While the content represents a wide-array of different topics, the class is primarily structured around action research projects designed by participants to impact teaching and learning at either the site or district level. Meeting twice a month for three-hours each time, the embedded model of professional learning set the expectation that the participants would implement their new learning from each class, and return with anecdotal evidence to share as they move through their action research. These action research projects were monitored on a continual basis by the three facilitators, and all participants were offered feedback on an ongoing basis. The primary difference between Cohort 1 and Cohort 2

was the level of individual support provided to candidates in their development of the action research projects. After reflecting on the year 1 cohort, the facilitators determined that additional support in the early stages of design were important and structured a more defined and timely feedback system.

Initial Data and Planning

A needs assessment was collected by NWRPDP staff in the fall of 2014. The instrument was structured around collecting data regarding the perceived gaps in professional learning opportunities in WCSD. Data from this needs assessment informed the decision to move forward and design professional learning opportunities for the Teacher Leadership audience: educators in TOSA (implementation specialists, embedded coaches, instructional leaders, etc.) positions already, and educators that were interested in assuming leadership responsibilities but not leaving the classroom. The scope and sequence for this cohort was strategically designed to ensure participants would be adequately prepared to assume these new responsibilities as well as to strengthen the competencies of those teachers already serving in leadership roles. From these initial findings, new Teacher Leader collaborations (2014-17) have led to a defined series of learning that supports a career lattice for professional growth for K-12 teachers.

When the cohort launched in the fall of 2016, the 25 participants took two pre-assessments. The first instrument used was a Teacher Self-Efficacy Survey, TSES (Tschannen-Moran & Woolfolk Hoy, 2001). The second tool that was used was a Teacher Leader Competencies Self-Reflection. The intent of both tools was to collect data regarding teachers' perception of self-efficacy in the instructional setting as well as in a Teacher Leadership role. The results of the TSES were mixed and indicated that while 17 of the participants in the cohort already saw themselves as efficacious instructional leaders, the other 8 of the participants were feeling disempowered and struggling with their feelings of self-efficacy. Not surprisingly, these experienced teachers had a strong grasp of how to support student growth and engagement through powerful instructional practices. However, a concerning number of teachers (72%) indicated concerns regarding their ability to impact students motivation and 68% indicated they lacked a deep understanding of engaging families in the learning process. The three facilitators used this data to inform their planning as they revised the scope and sequence of the TLC curriculum for the new cohort.

Delivery of Services

Services were delivered in two different ways: monthly meetings and two teacher substitute work-days. The monthly meetings were held twice a month from 4:15-7:00 pm and the two substitute days were scheduled in January and February to ensure that the teachers were offered time for reflection and collaboration with one another on their action research projects after they had already been given the time to engage with numerous steps and collaborators.

Results and Reflection

The figures below display the data collected from the TSES pre- and post-surveys. Participants responded on a scale of 1 – 9 (Bottom legend of graph). Numbers indicated in the graph

legends with no bars represented in the graph indicate that there were no responses at that scale level. Number of responses are signified on the left of the graph.

The data collected in the spring of 2017 showed an interesting trend when compared to the data from this same group in the previous year. Participants still all indicated significant feelings of self-efficacy overall and the area that had the most growth from the previous year, participant's perception of their ability to manage students' behavior in the classroom, continued to show the most growth (See Figures 1 and 2 below). In particular, the data shows that participants of the TLC Cohort saw the largest growth in the areas of differentiation for all student needs and students following rules. The author would like to assert that there is a strong association between participation in the TLC Cohort, and classroom management because the curriculum of the class offered teachers the opportunity to engage in a significant amount of research regarding resistance, how to de-escalate conflict, and how to have difficult conversations. While the content was framed for the participants in adult learning and resistance, it appears that the data may offer evidence that the learning was applied in classroom structures and engagement as well.

Figure 1: TSES Fall 2016
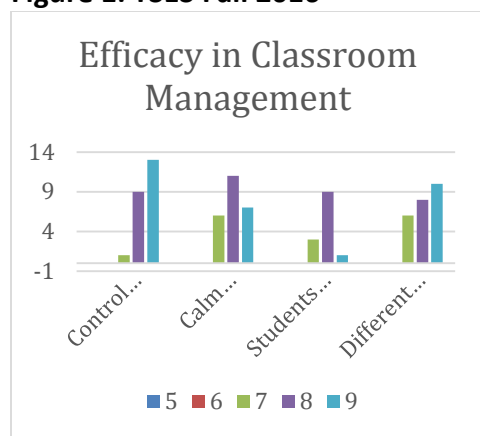
Figure 2: TSES Spring 2017
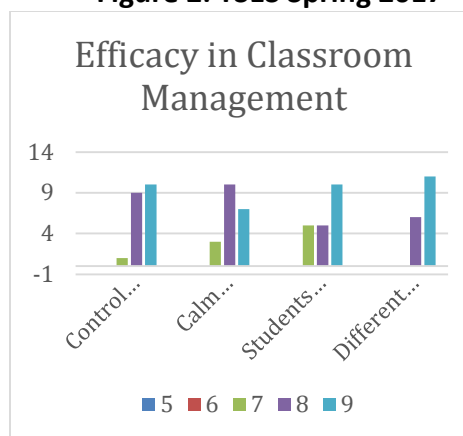
The Teacher Self-Efficacy Survey also offered detailed data regarding teachers' perception of their efficacy in instructional strategies (See Figures 3 and 4 below). While the data were able to capture growth across all the categories in this area, the most remarkable growth was in the areas of questioning and depth of teacher knowledge. The author posits that the intentional design of the 45 hours of learning in the TLC Cohort, focused on discussion, questioning, and practical application of new learning had a positive impact on teachers' self-efficacy in these areas.

Figure 3: TSES Fall 2016

Efficacy in Instructional Strategies

Legend: 4, 5, 6, 7, 8, 9
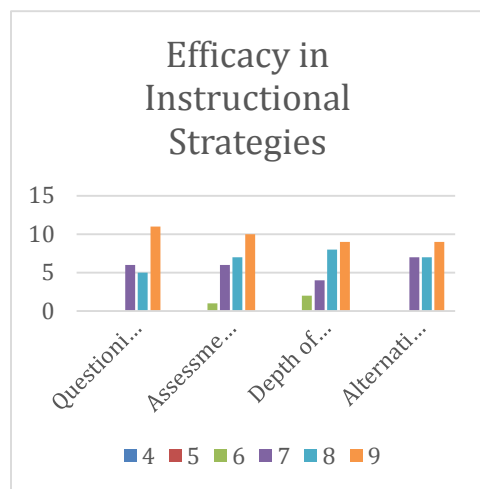
Figure 4: TSES Spring 2017

Efficacy in Instructional Strategies

Legend: 3, 4, 5, 6, 7, 8, 9
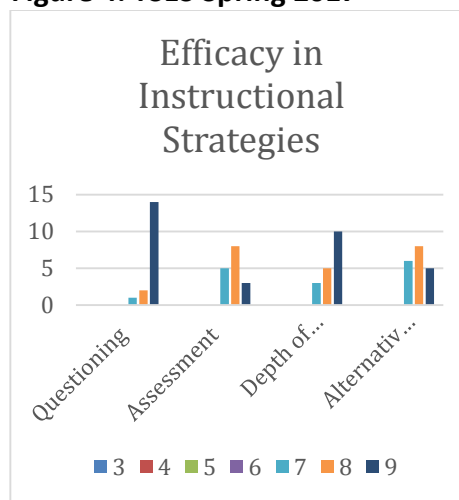
The data that were collected regarding teachers' efficacy in student engagement followed the trend of the other areas assessed; an upward trend toward increased self-efficacy was reported by all respondents (See Figures 5 and 6 below). It is worth noting that there were some participants that had lower feelings of self-efficacy at the end of the year in regards to parent involvement. In anecdotal evidence that was collected these teachers indicated that they had a particularly difficult year with some of their students' parents and perhaps were feeling a lack of efficacy due to these tensions. The data regarding student value in learning and mindset are particularly interesting, as it appears that the majority of participants believe they have increased their ability to positively impact a student's belief that they can be successful in school. These data support research conducted by Klassen, TZE, Betts and Gordon (2011) who found that teachers with high self-efficacy were more likely to positively impact their students' perception of self-efficacy, engagement in learning, and attitude toward adversity than educators with lower perceived self-efficacy. Both the qualitative and quantitative data collected from the TLC Cohort participants indicate that participation in the TLC Cohort positively impacts teachers' self-efficacy.

Figure 5: TSES Fall 2016

Efficacy in Student Engagement

Legend: 4, 5, 6, 7, 8, 9
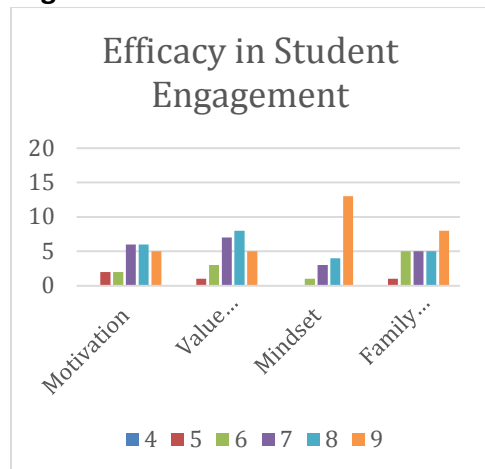
Figure 6: TSES Spring 2017

Efficacy in Student Engagement

Legend: 3, 4, 5, 6, 7, 8, 9
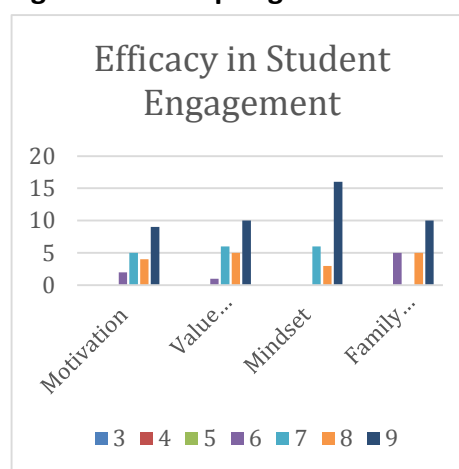
Evaluation Comments

The following comments are examples of how participants described their learning during the TLC Cohort project.

- *"I had the opportunity to engage in deep self-reflection and really focus on determining what I value and how I can be a change agent to achieve these values." Secondary participant*
- *"Teacher Leadership is finding a tribe of like-minded colleagues to engage in the collaboration and journey of improving and strengthening our profession and community for the benefit of our students." -Middle School participant*
- *"Teacher Leadership is the capacity of classroom teachers to impact change in other adults that will affect students outside of our own rooms. I became more focused on my belief system – always do what's right for kids."- Elementary participant*
- *"When your vision is clear, it doesn't matter what the district initiates or new mandates are because the vision that is best will stay in focus and the rest of it will just become a lens with which to accomplish the vision." -Secondary participant*
- *"Teacher Leadership is leading from within. I feel honored to have worked with, learned from, and joined with these great people." -Middle School participant*
- *"Teacher Leadership is the ability and willingness of classroom teachers to affect change in their schools, districts, states, and across the country. I have been confident in speaking out about my beliefs." -Elementary Participant*
- *"I wonder how I got so lucky! In the past, two years I went from thinking I needed to leave the classroom for a new challenge to being completely satisfied with my career. I can stay in the classroom and practice what I preach by facilitating change." -Secondary participant*

The data collected from the Teacher Leader Competencies Post Assessments at the end of year 1 (spring 2016) and end of year 2 (spring of 2017) offered an interesting view of how teacher leaders have grown in all areas (See Figures 7 and 8 below). While the personal growth targets set by participants were indicative of their growth, participants also shared that there was an important shift in their confidence setting personal goals that were evidence-based and knowing how to collect data on those measures. An additional step that was taken in the 2016-17 cohort was focused support of individual action research projects through resource suggestions and individual coaching. On the final reflection for the teachers they were asked if this was beneficial and/or had a marked impacted on their understanding. All of the participants indicated that this added benefit was impactful and suggested that it should be a part of year 1 from now on. Based on these data, the author is able to posit that participants in the Teachers Leading Change cohort have marked increases in their perceived self-efficacy and competencies as indicated by the Teacher Leader Competencies rubric.

Figure 7: Teacher Leader Competencies Self-Reflection Post-Assessment Spring 2016

Teacher Leader Competencies Post-Assessment
May 2016

Emerging   Developing   Performing   Transforming
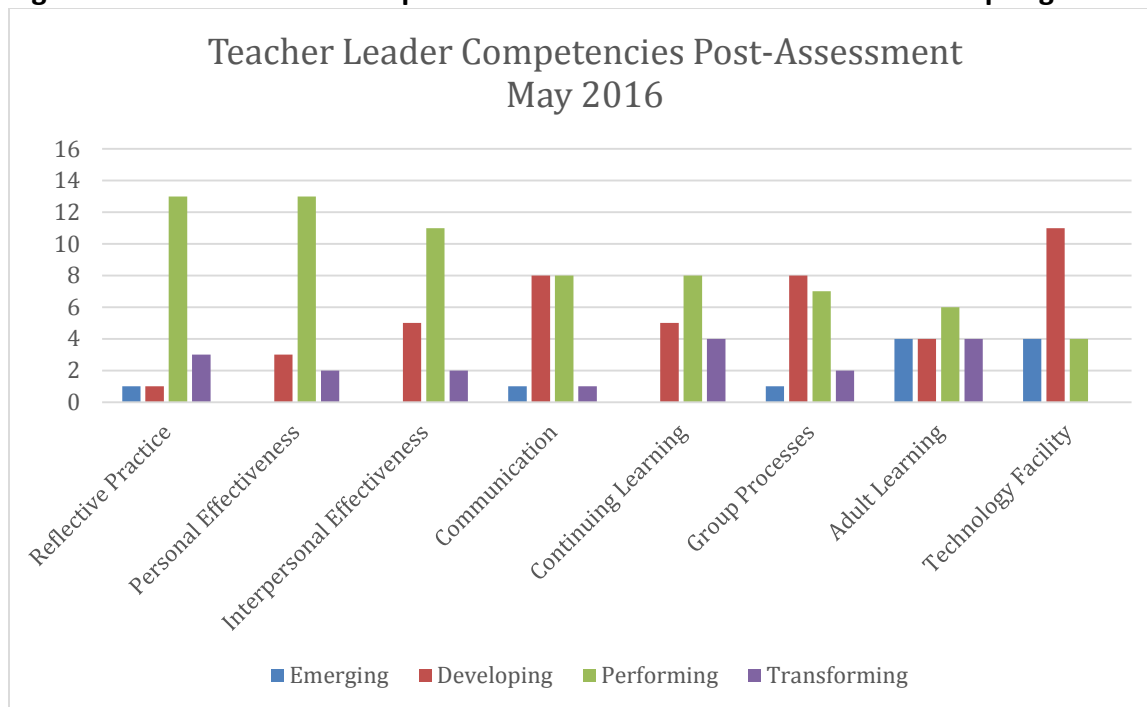
Figure 8: Teacher Leader Competencies Self-Reflection Post Assessment Spring 2017

Teacher Leader Competencies Post-Assessment
May 2017

Emerging   Developing   Performing   Transforming
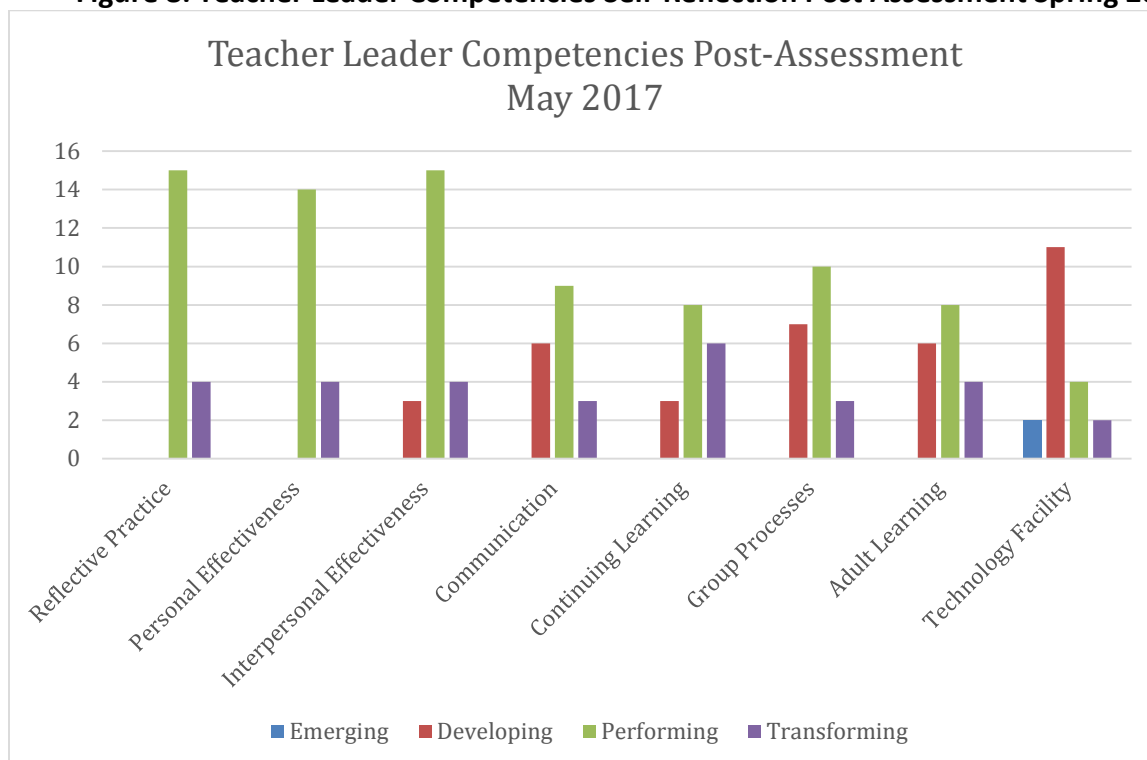
Conclusion

Based on the evidence collected from the Teacher Leader Competencies assessment, the TSES, and a variety of other formative assessments throughout the two-year cohort, this professional learning was a successful learning opportunity for teachers. The intent of the learning was to offer participants a space where they could elevate their understanding of the roles and competencies to assume Teacher Leadership responsibilities. All the data collected indicate that this goal was achieved. In addition to their learning and growth, all participants designed action research projects that have positively impacted teaching and learning in their district.

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NWRPDP Case Study 13: <u>Teachers Leading Change - Logic Model</u>

Situation: Leadership Development (recruitment and retention): Provide professional learning in Teacher Leadership in order to develop sustainable leadership capacity for change and improvement in schools by retaining and supporting excellent teachers and education leaders; Provide professional learning opportunities for teachers and other education leaders who want to be instructional leaders without becoming administrators and provide training for principals to support teachers as instructional leaders.

Inputs	Outputs		Outcomes – Impact		
	Activities	*Participation*	Short	Medium	Long
Staff - Funding - Partnerships - Facilities	Teachers Leading Change Cohort Design of Teacher Leadership curriculum Update Weebly website to share information and projects 4 day Summer Coaching Institute Innovation Awards to honor Teacher Leadership work	Nevada K-12 teachers Department of Professional Learning (WCSD) Department of Professional Growth Systems (WCSD) Department of English Learning (WCSD) Northwest Regional Professional Development Program Nevada State Educators Association Nevada Department of Education University of Nevada, Reno WCSD Curriculum and Instruction Learning Forward Nevada Nevada Succeeds	- Increased self-efficacy of Teacher Leaders. - Enhanced understanding of the roles and hybrid opportunities for Teacher Leadership inside and outside of the classroom. - Increased knowledge of the Teacher Leader Competencies and how they frame Teacher Leadership, roles, and dispositions in Nevada. These competencies include 60 hours of learning and practical application in: - Group Processes - Personal Effectiveness - Interpersonal Effectiveness - Communication - Adult learning - Continuing learning and education - Technological facility - Reflective practice **Measures:** -Pre and post Teacher Self-Efficacy Survey (TSES) - Pre and post survey to measure Teacher Leader Competences - Qualitative perception survey	- Increase the use of embedded action research designed to impact teaching and learning. - Develop an infrastructure of Teacher Leaders within each school that enhances a sustainable system of growth and development impacting teaching and learning. - Increase the number of Teacher Leaders in coaching, mentoring, and support roles that have engaged in learning on the Teacher Leader Competencies in Nevada. - Design a career matrix that identifies learning progressions to support professional growth in a variety of Teacher Leader roles (Badging program) **Measures:** - Pre and post survey to measure Teacher Leader Competencies - district data regarding number of teachers participating in Badging program - Case study	-Develop a statewide Network of Teacher Leaders with enhanced professional capacity to supports advocacy, teaching and learning for students and colleagues. -Increase the statewide alignment of Teacher Leadership curriculum with the Teacher Leader Competencies, roles, and dispositions of Teacher Leaders. - Create sustainable infrastructure that increases collaborative discourse about leadership, instruction, and best practices in Nevada. - Design a statewide career matrix that offers Badges (micro-credentials) in a variety of alternative roles for Teacher Leaders. -Increased retention of excellent teachers. Through the process of developing teacher voice grounded in deep pedagogical and content knowledge, TLC graduates will foster professional learning environments that elevate learning forward for all Nevada teacher and students. **Measures:** -Existing district data on: retention of teachers, graduation rates, teacher satisfaction and climate surveys

Assumptions
-This project is a highly collaborative effort between NWRPDP, C&I, DPL, and PGS. If any of those partnerships were to be withdrawn this project may be difficult to implement. It is assumed that all partnerships will continue.
- This project was heavily funded by grant funds received from GTLF in 2015. There is an assumption that there will be continued support at the state level to continue growing Teacher Leadership work.

External Factors- Funding, support, participation/interest

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Appendix A: Statewide Coordinating Council Evaluation Form

NW Regional Professional Development Program Activity Evaluation
2016-2017 School Year (NWRPDP - nwrpdp.com)

PRINT Participant Name (optional): _____

E-mail address: _____

Role Select One: ☐ Teacher ☐ Administrator ☐ Parent ☐ Other

Grade Level: ☐ Elementary ☐ Middle ☐ High School
Circle appropriate grades: K 1 2 3 4 5   6 7 8   9 10 11 12
Teaching Assignment: ☐ Math ☐ Language Arts ☐ Science ☐ Social Studies ☐ Other: _____
(if appropriate)
School: _____ District: _____

Activity/Training Title: _____ Activity/Training Date: _____

Facilitator/Presenter: _____ Location: _____

Sponsored by: ☐ Southern Nevada RPDP (Clark, Esmeralda, Lincoln, Nye, Mineral) ☐ Northeastern Nevada RPDP (Elko, Eureka, Humboldt, Lander, White Pine, Pershing) ☐ **Northwestern Nevada RPDP** (Carson, Churchill, Douglas, Lyon, Storey, Washoe)

Please rate the following characteristics of the activity.

	Not at all		To some extent		To a great extent	Don't know	N/A
1. The activity matched my needs.	1	2	3	4	5	6	7
2. The activity provided opportunities for interactions and reflections.	1	2	3	4	5	6	7
3. The presenter/facilitator's experience and expertise enhanced the quality of the activity.	1	2	3	4	5	6	7
4. The presenter/facilitator efficiently managed time and pacing of activities.	1	2	3	4	5	6	7
5. The presenter/facilitator modeled effective teaching strategies.	1	2	3	4	5	6	7
6. This activity added to my knowledge of standards and/or subject matter content.	1	2	3	4	5	6	7
7. The activity will improve my teaching skills.	1	2	3	4	5	6	7
8. I will use the knowledge and skills from this activity in my classroom or professional duties.	1	2	3	4	5	6	7
9. This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special ed., at-risk students).	1	2	3	4	5	6	7

10. Have you attended an NW RPDP professional development training prior to today? Yes_____ No_____

11. If **Yes**, has your past participation changed your Teaching Instruction or Administrator Responsibility?

Not at all   To some extent   To a great extent
1................2................3................4................5

Please add any questions or comments you may have for us or for future professional learning needs:
_____

_____

_____

Please use the back of this form if you need more writing space

Appendix B: The NWRPDP Professional Development Contact Form

NWRPDP CONTACT FORM 2016-2017

GENERAL INFORMATION		
Title of Class/Work:	Text and Lessons for Content Area Writing	
Date(s): 12/2		
Length of Services:	1	hours (rounded to the nearest .5 hour)
Trainer(s): Gray		

COUNTY		# OF TEACHERS EACH COUNTY	GROUP DEMOGRAPHICS	
☐	Washoe County			# of elementary teachers
☐	Storey County		16	# of middle school teachers
☐	Carson County			# of high school teachers
☒	Lyon County		1	# of administrators
☐	Churchill County			# of parents
☐	Douglas County			# of other (paraprofessionals, subs, district-level certified staff, HS counselors, etc.)
☐	Other County(ies) - List:		17	Total number of participants

TYPE OF INTERACTION (CHECK 1)					
☒	Training/In-service Class	☐	Observing/Coaching	☐	
☐	Consulting/Collaboration	☐	Parent/ Family Engagement	☐	
☐		☐			

FOCUS OF SERVICE (CHECK 1)			
☒	NVACS Literacy & English (including reading, writing, and composition)	☐	Parent/ Family Engagement
☐	NVACS Math	☐	Nevada Educator Performance Framework
☐	NVACS Science	☐	English Language Learners
☐	STEM	☐	PreK-Third Grade
☐	NVACS Social Studies	☐	Leadership
☐	Computer Education and Technology	☐	Assessment
☐		☐	
☐		☐	Other

Please attach this form to a readable participant list (include: first name, last name, school, position and county) and evaluation (if primary service was training).

Submitted by: Date: 12/5/16

Notes:

Appendix C: Standards for Professional Learning and NWRPDP Rubric for Implementation

Learning Communities
Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment

Leadership
Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate, and create support systems for professional learning

Resources
Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring, and coordinating resources for educator learning

Data
Professional learning that increases educator effectiveness and results for all students uses a variety of sources and types of student, educator and system data to pan, assess, and evaluate professional learning

Learning Designs
Professional learning that increases educator effectiveness and results for all students integrates theories, research, and odes of human learning to achieve its intended outcomes

Implementation
Professional learning that increases educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long-term change

Outcomes
Professional learning that increases educator effectiveness and results for all students aligns its outcomes with educator performances and student curriculum standards

Standard	4=Highly Effective	3=Effective	2=Somewhat Effective	1=Ineffective	0=Not Applicable
LEARNING COMMUNITIES: Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment	All participants engage in continuous improvement and follow up, take collective responsibility for the learning, and participate in creating alignment and accountability	Most participants are engaged all of the time, or all participants are engaged at least 75% of the time	Some participants are engaged in all levels	Few participants are engaged in all levels	This category would not apply to this project

Standard	4=Highly Effective	3=Effective	2=Somewhat Effective	1=Ineffective	0=Not Applicable
LEADERSHIP: Professional learning that increases educator effectiveness and results for all students requires skillful leaders who develop capacity, advocate, and create support systems for professional learning	The project is designed to develop capacity in all participants and creates support systems for ongoing learning	The project develops capacity in most participants and creates support systems for ongoing learning	The project develops capacity in some participants, support systems are incomplete	The project fails to develop capacity in participants and does not result in support systems for ongoing learning	This category would not apply to this project
RESOURCES: Professional learning that increases educator effectiveness and results for all students requires prioritizing, monitoring, and coordinating resources for educator learning	There is evidence of a system in place to prioritize, monitor and coordinate human, fiscal, material , technology and time resources to support the project longterm	There is evidence of a system in place to prioritize, monitor and coordinate human, fiscal, material , technology and time resources to support the project until all participants are trained	There is evidence of an inadequate system in place to prioritize, monitor and coordinate human, fiscal, material , technology and time resources to support the project	There is no evidence of a system in place to prioritize, monitor and coordinate human, fiscal, material , technology and time resources to support the project longterm	This category would not apply to this project
DATA: Professional learning that increase educator effectiveness and results for all students uses a variety of sources and types of student, educator and system data to pan, assess, and evaluate professional learning.	Student, educator and system data is continually analyzed to plan, assess progress and evaluated the project	Student, educator and system data is analyzed initially to plan the project, and at the end to evaluate the project	Data from any one source is analyzed prior to initiating the project and at the end of the project to determine improvement	Data is not used to determine the need for the project nor the success of the project	This category would not apply to this project
LEARNING DESIGNS: Professional learning that increase educator effectiveness and results for all students integrates theories, research, and odes of human learning to achieve its intended outcomes	Learning theories, research and models of human learning which emphasize active engagement are used consistently to plan the learning	Learning theories, research and models of human learning are used to plan the learning	Learning theories, research and models of human learning are used occasionally to plan the learning	Learning theories, research and models of human learning are not used to plan the learning	This category would not apply to this project

Standard	4=Highly Effective	3=Effective	2=Somewhat Effective	1=Ineffective	0=Not Applicable
IMPLEMENTATION: Professional learning that increase educator effectiveness and results for all students applies research on change and sustains support for implementation of professional learning for long-term change	Change research is consistently applied, there are follow up systems in place to sustain implementation, and constructive feedback is provided regularly to participants as they implement the program	Change research is inconsistently applied follow up systems are loosely in place to sustain implementation, and constructive feedback is provided occasionally to participants as they implement the program	Change research is inconsistently applied, there are no follow up systems in place to sustain implementation, and constructive feedback is not provided regularly to participants as they implement the program	Change research is not applied, there are no follow up systems in place to sustain implementation, and no constructive feedback is provided to participants as they implement the program	This category would not apply to this project

Appendix D: The NWRPDP Governing Board Meeting Agendas

Northwest RPDP Governing Board
AGENDA
September 15, 2016
9:00 – 12:00 PM
Gleason Building, Room 4
604 W. Musser Street
Carson City, NV

1. Welcome and Introductions

2. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

3. Approval of today's agenda   Possible Action Item

4. Review/approval of meeting notes from Spring 2016   Possible Action Item

5. State (NDE) Update   Information and Discussion

6. Discussion: Data points used for the NEPF in each   Information and Discussion
   NWRPDP District

7. Discussion: Read by Grade 3 – District approaches,   Information and Discussion
   successes, challenges, etc.

8. Budget Updates   Information and Discussion

9. RPDP Administrative Support Funds   Information and Discussion

10. Superintendents' Update   Information and Discussion

11. District Members' Announcements   Information and Discussion

12. Confirm 2016-17 Meeting Dates   Information and Discussion
                                                                 Possible Action Item

13. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

14. Adjournment   Possible Action Item

Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to notify Pam Mills, in writing at the NWRPDP, 380 – A Edison Way, Reno, NV 89502 or by calling (775) 861 – 4470.

This agenda has been posted at the following locations:
Southern Nevada RPDP, 515 West Cheyenne, Suite C, North Las Vegas, NV 89030
Douglas County School District, 751 Mono, Minden, NV 89423
Nevada State Department of Education, 700 E. Fifth Street, Carson City, NV 89701
Carson City School District, 1402 West King Street, Carson City, NV 89703
Churchill County School District, 690 S. Maine Street, Fallon, NV 89406
Washoe County School District, Administration Building, 425 East Ninth, Reno, NV 89512
Washoe County School District, Regional Center for Teaching and Learning, 380 Edison Way, Reno, NV 89502
Storey County School District, P.O. Box C, Virginia City, NV 89440
Lyon County School District, 25 E. Goldfield Avenue, Yerington, NV 89447
Northern Nevada RPDP, 1290 Burns Road, High Tech Center Room 119, Elko, NV 89801

Northwest RPDP Governing Board
AGENDA
November 17, 2016
9:00 – 12:00 PM
Gleason Building, Room 4
604 W. Musser Street
Carson City, NV

1. Welcome and Introductions

2. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

3. Approval of today's agenda — Possible Action Item

4. Review/approval of meeting notes from September 2016 — Possible Action Item

5. State (NDE) Update — Information and Discussion

6. NWRPDP Director Updates — Information and Discussion

7. Presentation on PreK-Third Grade-Melissa Burnham — Information and Discussion

8. Discussion: Student Learning Goals — Information and Discussion

9. Superintendents' Update — Information and Discussion

10. District Members' Announcements — Information and Discussion

11. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

12. Next Meeting: Thursday, January 19, 2016 — Information and Discussion

13. Adjournment — Possible Action Item

Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to notify Pam Mills, in writing at the NWRPDP, 380 – A Edison Way, Reno, NV 89502 or by calling (775) 861 – 4470.

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Churchill County School District, 690 S. Maine Street, Fallon, NV 89406
Washoe County School District, Administration Building, 425 East Ninth, Reno, NV 89512
Washoe County School District, Regional Center for Teaching and Learning, 380 Edison Way, Reno, NV 89502
Storey County School District, P.O. Box C, Virginia City, NV 89440
Lyon County School District, 25 E. Goldfield Avenue, Yerington, NV 89447
Northern Nevada RPDP, 1290 Burns Road, High Tech Center Room 119, Elko, NV 89801

Northwest RPDP Governing Board
AGENDA
February 9, 2017
9:00 – 12:00 PM
Gleason Building, Room 3
604 W. Musser Street
Carson City, NV

1. Welcome and Introductions

2. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

3. Approval of today's agenda   Possible Action Item

4. Review/approval of meeting notes from November 17, 2016   Possible Action Item

5. State (NDE) Update   Information and Discussion

6. NWRPDP Director Updates   Information and Discussion

7. Discussion: Student Learning Goals and NEPF   Information and Discussion

8. Superintendents' Update   Information and Discussion

9. District Members' Announcements   Information and Discussion

10. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

11. Next Meeting: **Tuesday**, March 7, 2017   Information and Discussion

12. Adjournment   Possible Action Item

Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to notify Pam Mills, in writing at the NWRPDP, 380 – A Edison Way, Reno, NV 89502 or by calling (775) 861 – 4470.

This agenda has been posted at the following locations:
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Churchill County School District, 690 S. Maine Street, Fallon, NV 89406
Washoe County School District, Administration Building, 425 East Ninth, Reno, NV 89512
Washoe County School District, Regional Center for Teaching and Learning, 380 Edison Way, Reno, NV 89502
Storey County School District, P.O. Box C, Virginia City, NV 89440
Lyon County School District, 25 E. Goldfield Avenue, Yerington, NV 89447
Northern Nevada RPDP, 1290 Burns Road, High Tech Center Room 119, Elko, NV 89801

Northwest RPDP Governing Board
AGENDA
March 7, 2017
9:00 – 12:00 PM
Gleason Building, Room 3
604 W. Musser Street
Carson City, NV

1. Welcome and Introductions

2. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

3. Approval of today's agenda   Possible Action Item

4. Review/approval of meeting notes from February 9, 2017   Possible Action Item

5. State (NDE)/Legislative Session Update   Information and Discussion

6. Traumatized Youth Workshop Planning Session (Mike Walker, NDE)   Information and Discussion
Possible Action Item

7. NWRPDP Director Updates   Information and Discussion

8. Discussion: NEPF/Student Learning Goals   Information and Discussion

9. Superintendents' Update   Information and Discussion

10. District Members' Announcements   Information and Discussion

11. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

12. Next Meeting: Thursday, May 18, 2017   Information and Discussion

13. Adjournment   Possible Action Item

Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to notify Pam Mills, in writing at the NWRPDP, 380 – A Edison Way, Reno, NV 89502 or by calling (775) 861 – 4470.

This agenda has been posted at the following locations:
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Douglas County School District, 751 Mono, Minden, NV 89423
Nevada State Department of Education, 700 E. Fifth Street, Carson City, NV 89701
Carson City School District, 1402 West King Street, Carson City, NV 89703
Churchill County School District, 690 S. Maine Street, Fallon, NV 89406
Washoe County School District, Administration Building, 425 East Ninth, Reno, NV 89512
Washoe County School District, Regional Center for Teaching and Learning, 380 Edison Way, Reno, NV 89502
Storey County School District, P.O. Box C, Virginia City, NV 89440
Lyon County School District, 25 E. Goldfield Avenue, Yerington, NV 89447
Northern Nevada RPDP, 1290 Burns Road, High Tech Center Room 119, Elko, NV 89801

Northwest RPDP Governing Board
AGENDA
May 18, 2017
9:00 – 12:00 PM
Gleason Building, Room 2
604 W. Musser Street
Carson City, NV

1. Welcome and Introductions

2. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

3. Approval of today's agenda   Possible Action Item

4. Review/approval of meeting notes from February 9 and March 7, 2017   Possible Action Item

5. State (NDE) Update   Information and Discussion

6. Presentation from PIFE Advisory Council, Cynthia Santos, NDE   Information and Discussion

7. NWRPDP Director Updates   Information and Discussion

8. Discussion: Student Learning Goals   Information and Discussion

9. Superintendents' Update   Information and Discussion

10. District Members' Announcements   Information and Discussion

11. Next Meeting: TBD for Fall 2017   Information and Discussion
       Possible Action Item

12. Public Comment (Comments from the public are invited at this time on topics not specifically addressed elsewhere in the agenda.)

13. Adjournment   Possible Action Item

STATE COORDINATING COUNCIL
REGIONAL PROFESSIONAL DEVELOPMENT PROGRAM

Statewide Coordinating Council
Regional Professional Development Program

Plan for Professional Development

2012-2017

PURPOSE....MISSION...Why we exist...

Core Elements of the Mission of the State Coordinating Council of the Regional Professional Development Programs (SCCRPDP)
To strengthen the Regional Professional Development Programs (RPDPs) through ongoing collaboration, communication, and networking
To promote the design and provision of high quality professional development aligned with the *Standards for Professional Learning* as a foundation for continuous school improvement
To increase student achievement through support for the provision of high quality professional development for teachers and administrators addressing issues of equity, access, and excellence in education for all students

FUTURE DIRECTION....VISION....Our future...

Core Vision Elements
SCCRPDP will facilitate collaboration and communication of the RPDPs for continued growth and improvement in the quality of services provided.
Teachers will have the pedagogy, content, and assessment strategies to improve student learning. High quality professional development will deepen and enhance teacher practice through embedded activities and follow-up.
School leaders will provide effective instructional leadership that supports teacher professional growth and development for improved student learning.
All RPDP professional development will be aligned to the *Standards for Professional Learning*.

STRATEGIC DIRECTION.... LONG-TERM GOALS....Getting to where we want to be…

KEY GOALS...STRATEGIC DIRECTION
Goal 1: To implement the *Standards for Professional Learning*
Goal 2: To design and implement high quality professional development for teachers to improve student learning
Goal 3: To design and implement high quality professional development for school administrators that increases their instructional leadership skills to improve student learning
Goal 4: To implement systems to measure impact of RPDP professional development on teacher effectiveness and student learning

KEY STRATEGIES....ACTION STEPS...How to get it done...

Key Strategies
Goal 1: To support the use of the *Standards for Professional Learning* in the design and delivery of professional development for educators statewide
Strategies: • Identify common services, actions, and practices of the RPDPs • Establish a collective voice on professional development issues as appropriate • Promote delivery of high quality professional development aligned with the *Standards for Professional Learning*. • Support opportunities for regional trainers to share expertise between and within regions and participate in their own personal professional development
Goal 2: Oversee the design and implementation of high quality professional development aligned with the *Standards for Professional Learning* in order for educators to improve student learning and close achievement gaps
Strategies: • Utilize a third-part evaluator to monitor the provision of high quality professional development focused on the *Standards for Professional Learning* to improve teaching and learning • Provide support to educators in the development, implementation, and evaluation of their school improvement initiatives
Goal 3: Oversee the development and implementation of high quality professional development for school administrators that increases their knowledge of curriculum, instruction, and assessment to improve teaching and learning
Strategies: • Provide for the delivery of high quality professional development on instructional leadership skills that has sustained impact on teacher effectiveness and student learning • Oversee support to school administrators in the development, implementation and evaluation of their school improvement initiatives • Ensure professional development supports the school leadership responsibilities in the areas of: curriculum/instruction, assessment/accountability, vision/culture, and operations/management
Goal 4: To implement systems by region to measure impact of RPDP professional development on educator effectiveness and student learning
Strategies: • Provide a forum for the discussion and refinement of evaluation practices that can most effectively measure the impact of professional development on teacher effectiveness and student learning • Oversee systems for communicating and reporting findings • Review evaluation data for analysis, decision-making, future offerings, goal-setting, and continuous improvement

Appendix F: Carson City School District Services Summary

Carson City School District has 11 schools: six elementary schools, two middle schools, one comprehensive high school, one alternative high school, and one charter school. Carson has 7% of the schools in the NWRPDP Region, which includes 154 schools. One full-time learning facilitator is housed in Carson.

Training focused mainly on Computer Education and Technology, and the Nevada Academic Content Standards in math and science.

Participant Mean Ratings on Quality of RPDP Trainings

(Scale: 1 = not at all, 3 = to some extent, 5 = to a great extent)	CCSD	Region
The activity matched my needs	4.6	4.6
The activity provided opportunities for interactions and reflections	4.8	4.8
The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.9	4.8
The presenter/facilitator efficiently managed time and pacing of activities.	4.8	4.8
The presenter/facilitator modeled effective teaching strategies.	4.8	4.7
This activity added to my knowledge of standards and/or subject matter content.	4.7	4.6
The activity will improve my teaching skills.	4.7	4.6
I will use the knowledge and skills from this activity in my classroom or professional duties.	4.8	4.7
This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special education, at-risk students).	4.7	4.5

Number of Educators Trained by NWRPDP

	Unduplicated	Duplicated
ES Teachers	203	909
MS Teachers	70	358
HS Teachers	43	98
Administrators	23	47
Others	95	180
Totals	434	1592

Carson educators were 17.3% of the educators served in the region (Using the unduplicated regional count of 2059 educators).

Regional Learning Facilitator (LF) Productivity:
- LFs spent 1,546 hours planning for CCSD interactions.
    - This was 30% of the total planning time (5,184 hours).
- LFs spent 1212.5 hours in interactions with CCSD employees.
    - This was 22% of total interaction time (5545 hours).
- Overall, LFs spent 28% of their time working with educators in CCSD.
- LFs spent approximately 10% of their time working with the Nevada Department of Education and other state committees in support of the Nevada Academic Content Standards.
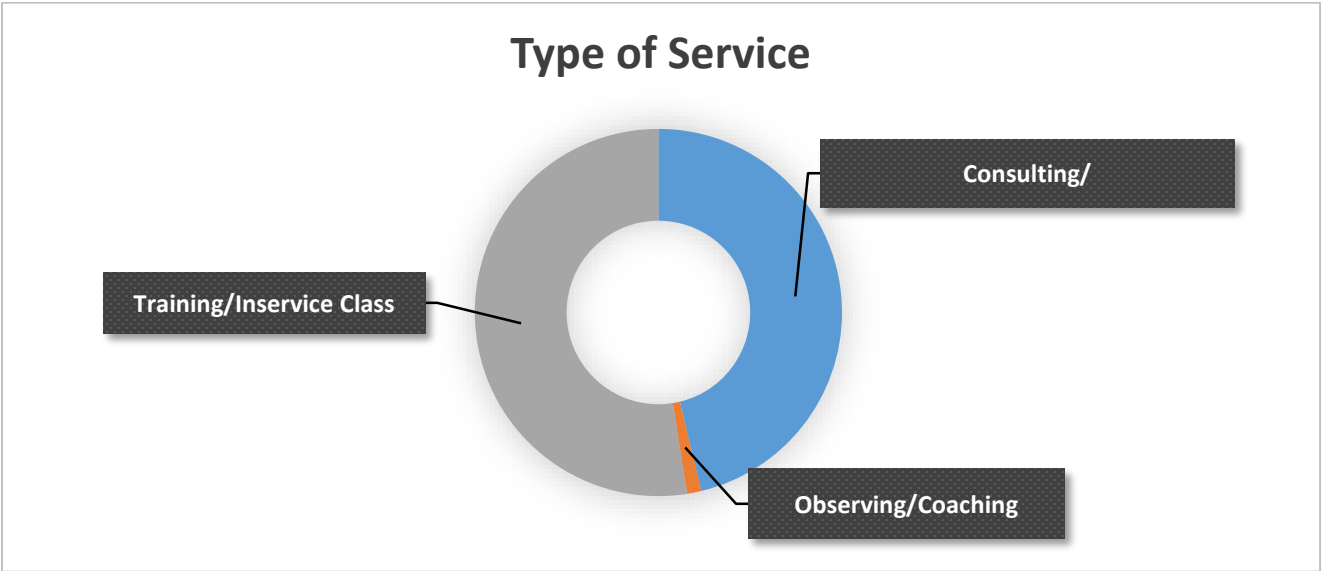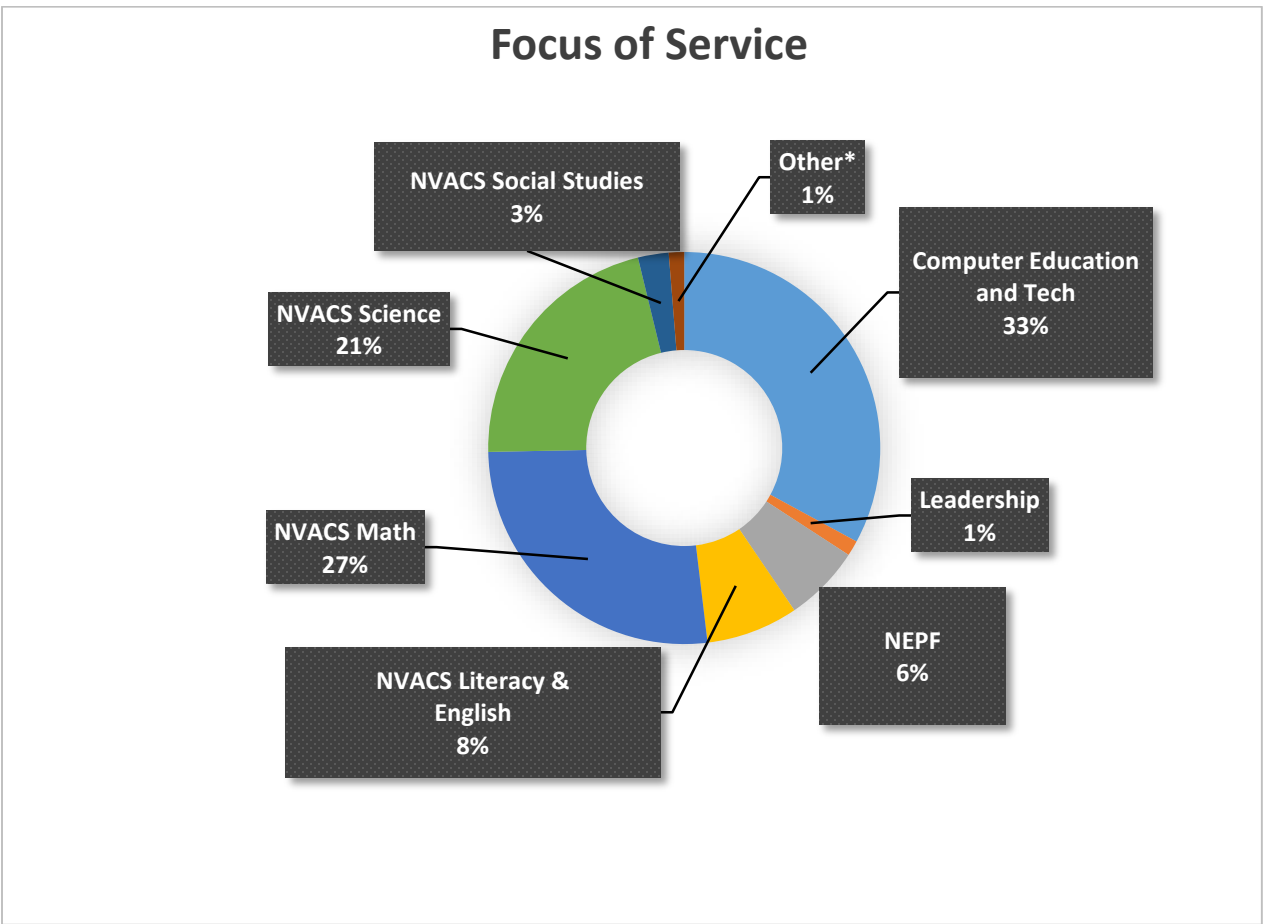
Figure 1: Types of Services Provided

Type of Service

- Consulting/
- Training/Inservice Class
- Observing/Coaching

Figure 2: Focus of Services

Focus of Service

- NVACS Social Studies 3%
- Other* 1%
- NVACS Science 21%
- Computer Education and Tech 33%
- NVACS Math 27%
- Leadership 1%
- NVACS Literacy & English 8%
- NEPF 6%

Appendix G: Churchill County School District Services Summary

Churchill County School District has six schools: one Pre-K school, one Kindergarten-First grade school, one school for grades two-three, one school for grades four-five, one middle school, and one comprehensive high school. A full-time Learning Facilitator coordinated services for Churchill County. A second full-time facilitator was housed in Churchill but served the entire region in PreK-third grade initiatives.

Primary areas supported by regional learning facilitators this year were the Nevada Educator Performance Framework, the Nevada Academic Content Standards in math and literacy, followed by PreK-third grade initiatives, and other supports for English Language Learners and new teachers.

Participant Mean Ratings on Quality of RPDP Trainings

(Scale: 1 = not at all, 3 = to some extent, 5 = to a great extent)	ChCSD	Region
The activity matched my needs	4.4	4.6
The activity provided opportunities for interactions and reflections	4.7	4.8
The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.7	4.8
The presenter/facilitator efficiently managed time and pacing of activities.	4.7	4.8
The presenter/facilitator modeled effective teaching strategies.	4.6	4.7
This activity added to my knowledge of standards and/or subject matter content.	4.5	4.6
The activity will improve my teaching skills.	4.4	4.6
I will use the knowledge and skills from this activity in my classroom or professional duties.	4.5	4.7
This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special education, at-risk students).	4.5	4.5

Number of Educators Trained by NWRPDP

	Unduplicated	Duplicated
ES Teachers	89	138
MS Teachers	11	42
HS Teachers	30	70
Administrators	4	15
Others	80	199
Totals	214	464

Churchill educators were 10.4% of the educators trained in the region (Using the Unduplicated regional count of 2059 educators).

Regional Learning Facilitator (LF) Productivity:
- LFs spent 1,917 hours planning for ChCSD interactions.
    - This was 37% of the total planning time (5,184 hours).
- LFs spent 1,888 hours in interactions with ChCSD employees.
    - This was 34% of total interaction time (5,545 hours).
- Overall, LFs spent 39% of their time working with educators in ChCSD.
- LFs spent approximately 10% of their time working with the Nevada Department of Education and other state committees in support of the Nevada Academic Content Standards.
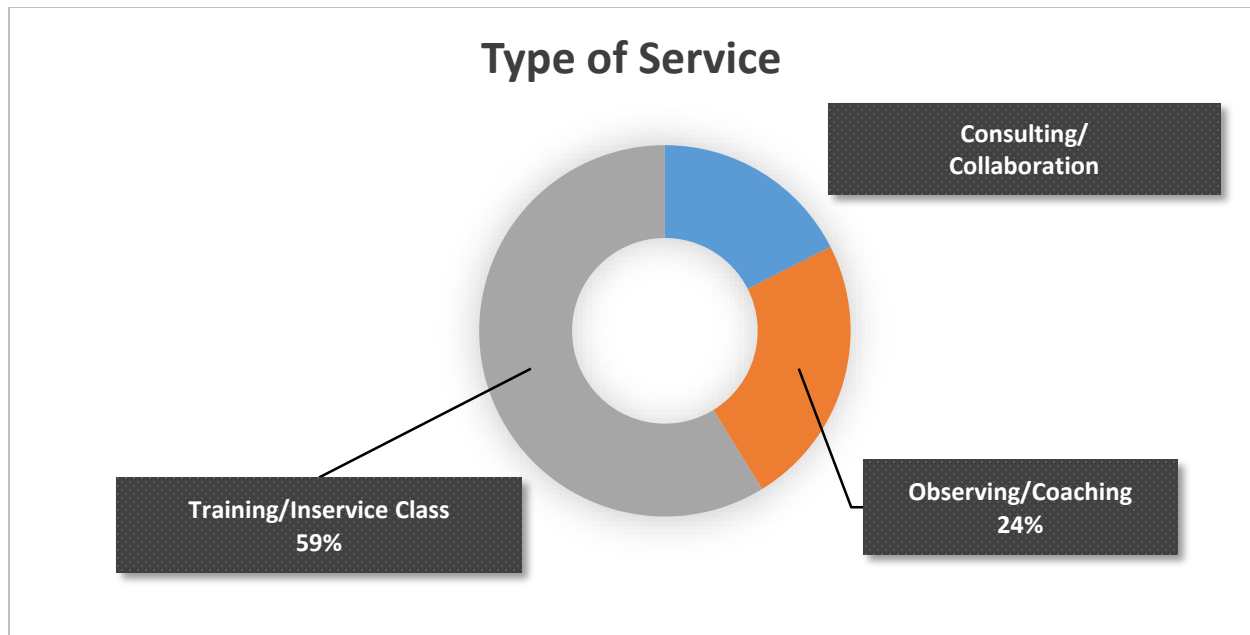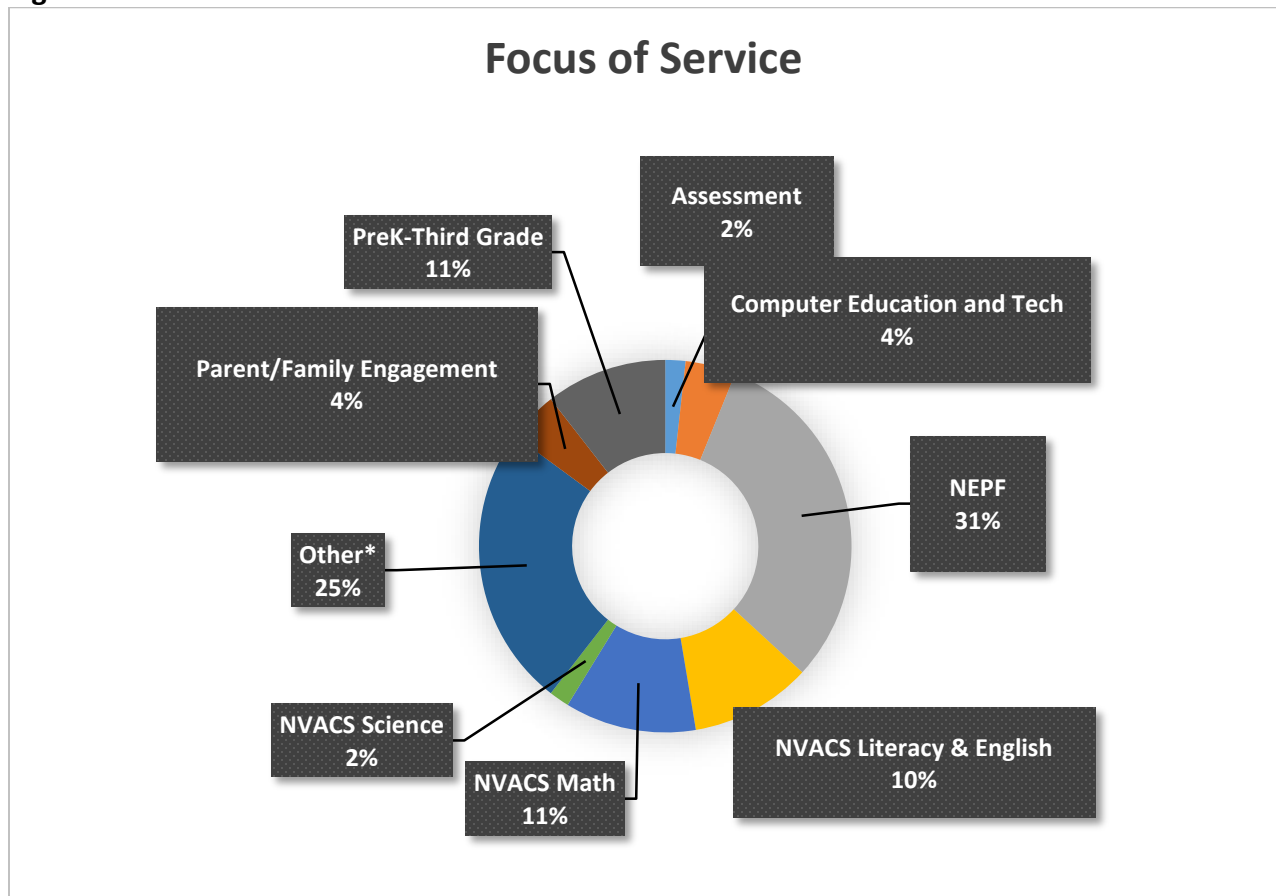
Figure 1: Types of Services Provided

Type of Service

- Consulting/Collaboration
- Observing/Coaching 24%
- Training/Inservice Class 59%

Figure 2: Focus of Services

Focus of Service

- Assessment 2%
- Computer Education and Tech 4%
- PreK-Third Grade 11%
- Parent/Family Engagement 4%
- NEPF 31%
- Other* 25%
- NVACS Literacy & English 10%
- NVACS Science 2%
- NVACS Math 11%

Appendix H: Douglas County School District Services Summary

> **Douglas County School District** has 14 schools: seven elementary schools, three middle schools, and four high school schools. Douglas has 9% of the schools in the NWRPDP Region, which includes 154 schools. A full-time Learning Facilitator coordinated services for Douglas County.
>
> The majority of services provided this year were in support of the Nevada Academic Content Standards in math, the Nevada Educator Performance Framework, and other supports in Mindset/Social Emotional Learning, new teacher training, and formative assessment.

Participant Mean Ratings on Quality of RPDP Trainings

(Scale: 1 = not at all, 3 = to some extent, 5 = to a great extent)	DCSD	Region
The activity matched my needs	4.3	4.6
The activity provided opportunities for interactions and reflections	4.7	4.8
The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.7	4.8
The presenter/facilitator efficiently managed time and pacing of activities.	4.7	4.8
The presenter/facilitator modeled effective teaching strategies.	4.7	4.7
This activity added to my knowledge of standards and/or subject matter content.	4.3	4.6
The activity will improve my teaching skills.	4.4	4.6
I will use the knowledge and skills from this activity in my classroom or professional duties.	4.5	4.7
This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special education, at-risk students).	4.3	4.5

Number of Educators Trained by NWRPDP

	Unduplicated	Duplicated
ES Teachers	154	341
MS Teachers	28	61
HS Teachers	35	56
Administrators	23	69
Others	13	32
Totals	253	559

Douglas educators were 12.3% of the educators trained in the region (Using the Unduplicated regional count of 2059 educators).

Regional Learning Facilitator (LF) Productivity:

- LFs spent 1,375 hours planning for DCSD interactions.
    - This was 26.5% of the total planning time (5,184 hours).
- LFs spent 1,021.5 hours in interactions with DCSD employees.
    - This was 18.4% of total interaction time (5,545 hours).
- Overall, LFs spent 21% of their time working with educators in DCSD.
- LFs spent approximately 10% of their time working with the Nevada Department of Education and other state committees in support of the Nevada Academic Content Standards.
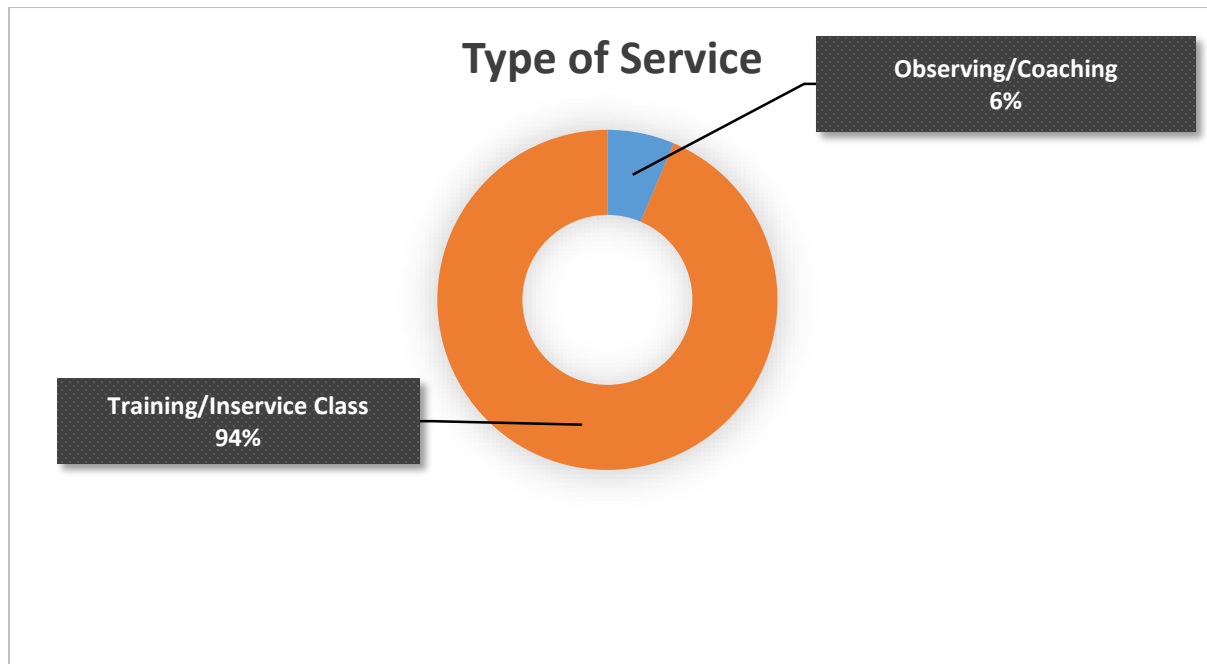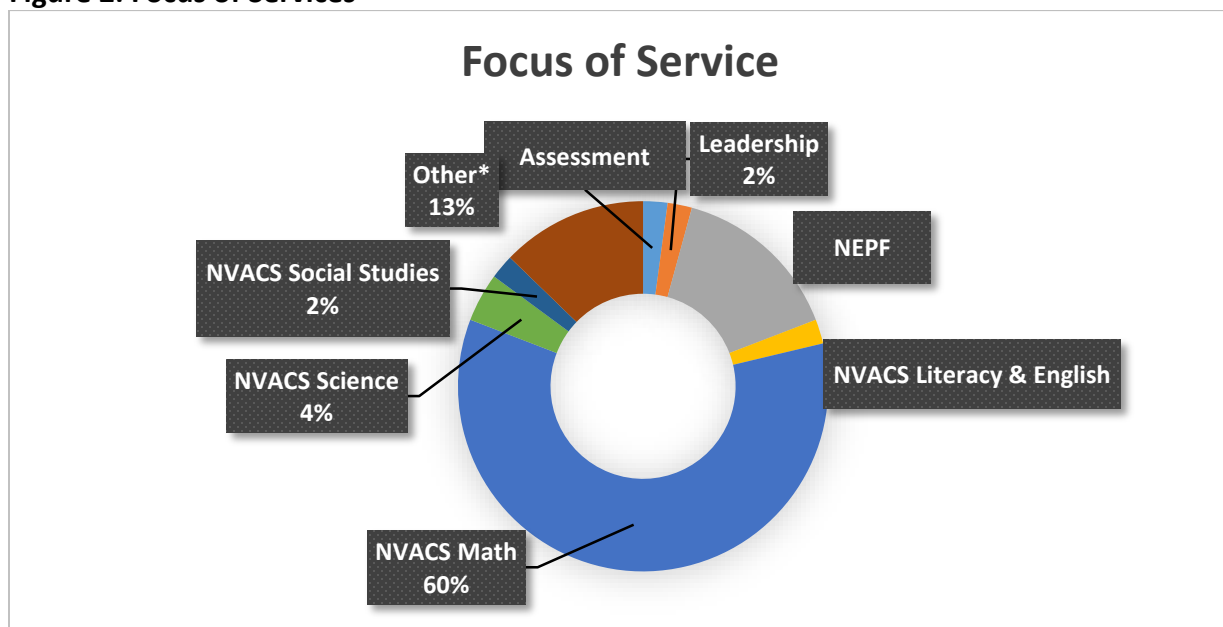
Figure 1: Types of Services Provided

Type of Service

- Observing/Coaching 6%
- Training/Inservice Class 94%

Figure 2: Focus of Services

Focus of Service

- Other* 13%
- Assessment
- Leadership 2%
- NVACS Social Studies 2%
- NEPF
- NVACS Science 4%
- NVACS Literacy & English
- NVACS Math 60%

Appendix I: Lyon County School District Services Summary

> **Lyon County School District** has 17 schools in five communities (Yerington, Dayton, Fernley, Smith Valley and Silver Springs): eight elementary schools, four intermediate schools, four high schools, one K-8 school, and one K-12 school. Lyon has 11% of the schools in the NWRPDP Region, which includes 154 schools. A full-time facilitator coordinates services for Lyon County.
>
> Services were focused this year on the Nevada Academic Content Standards (NVACS) in literacy followed by the NVACS science and the Nevada Educator Performance Framework.

Participant Mean Ratings on Quality of RPDP Trainings

(Scale: 1 = not at all, 3 = to some extent, 5 = to a great extent)	LCSD	Region
The activity matched my needs	4.6	4.6
The activity provided opportunities for interactions and reflections	4.7	4.8
The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.7	4.8
The presenter/facilitator efficiently managed time and pacing of activities.	4.7	4.8
The presenter/facilitator modeled effective teaching strategies.	4.6	4.7
This activity added to my knowledge of standards and/or subject matter content.	4.6	4.6
The activity will improve my teaching skills.	4.6	4.6
I will use the knowledge and skills from this activity in my classroom or professional duties.	4.7	4.7
This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special education, at-risk students).	4.6	4.5

Number of Educators Trained by NWRPDP

	Unduplicated	Duplicated
ES Teachers	129	230
MS Teachers	43	73
HS Teachers	18	22
Administrators	19	34
Others	8	15
Totals	217	374

Lyon educators were 10.5% of the educators trained in the region (Using the Unduplicated regional count of 2059 teachers).

Regional Learning Facilitator (LF) Productivity:
- LFs spent 1,731 hours planning for LCSD interactions.
  - This was 33.4% of the total planning time (5,184 hours).
- LFs spent 1,147 hours in interactions with LCSD employees.
  - This was 21% of total interaction time (5,545 hours).
- Overall, LFs spent 18% of their time working with educators in LCSD.
- LFs spent approximately 10% of their time working with the Nevada Department of Education and other state committees in support of the Nevada Academic Content Standards.
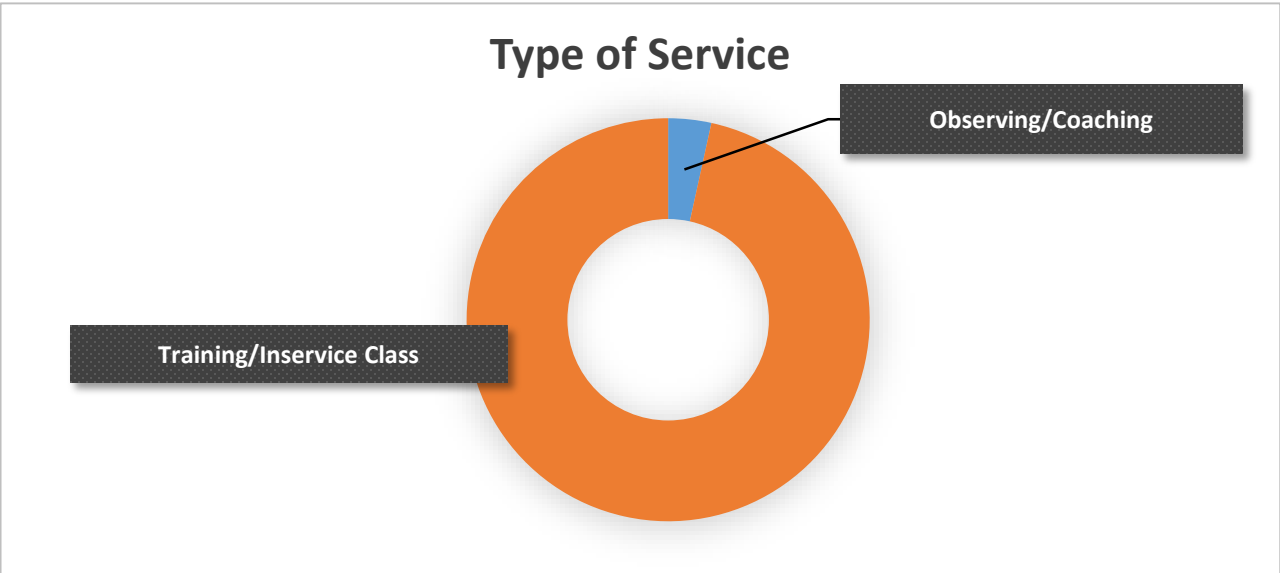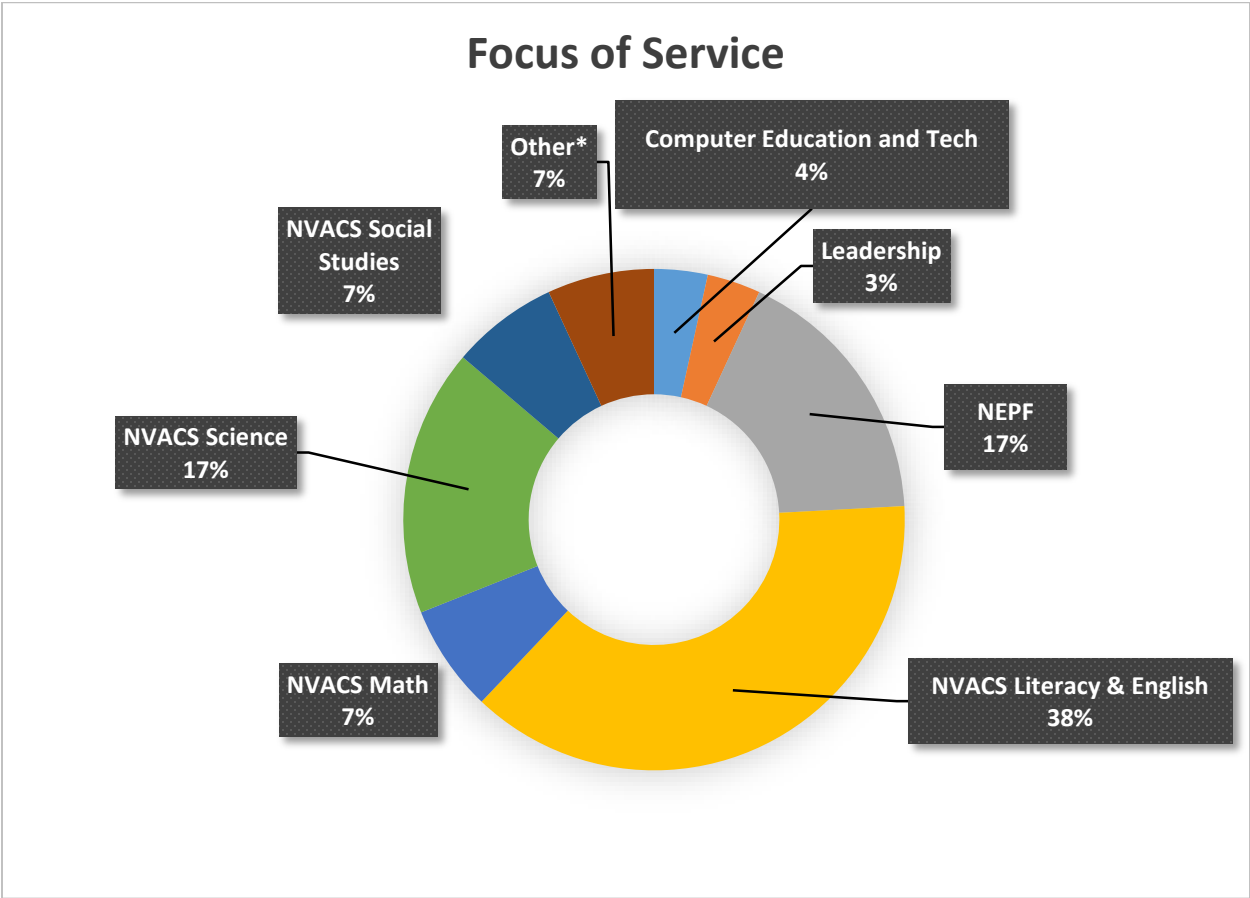
Figure 1: Types of Services Provided

Type of Service

Observing/Coaching

Training/Inservice Class

Figure 2: Focus of Services

Focus of Service

Other*
7%

Computer Education and Tech
4%

NVACS Social
Studies
7%

Leadership
3%

NVACS Science
17%

NEPF
17%

NVACS Math
7%

NVACS Literacy & English
38%

Appendix J: Storey County School District Services Summary

> **Storey County School District** has four schools and one part-time trainer dedicated to its professional development. It offers two elementary schools, one middle school, and one high school. Storey County has 2.6% of the schools in the NWRPDP Region, which includes 154 schools.
>
> Storey County received services in implementing the Nevada Academic Content Standards (NVACS) in science and literacy, followed by the Nevada Educator Performance Framework, and NVACS in math.

Participant Mean Ratings on Quality of RPDP Trainings

(Scale: 1 = not at all, 3 = to some extent, 5 = to a great extent)	SCSD	Region
The activity matched my needs	4.7	4.6
The activity provided opportunities for interactions and reflections	4.8	4.8
The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.9	4.8
The presenter/facilitator efficiently managed time and pacing of activities.	4.9	4.8
The presenter/facilitator modeled effective teaching strategies.	4.9	4.7
This activity added to my knowledge of standards and/or subject matter content.	4.9	4.6
The activity will improve my teaching skills.	4.7	4.6
I will use the knowledge and skills from this activity in my classroom or professional duties.	4.8	4.7
This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special education, at-risk students).	4.6	4.5

Number of Educators Trained by NWRPDP

	Unduplicated	Duplicated
ES Teachers	10	20
MS Teachers	3	5
HS Teachers	3	4
Administrators	0	0
Others	1	1
Totals	17	30

Storey educators were .8% of the educators trained in the region (Using the Unduplicated regional count of 2059 educators).

Regional Learning Facilitator (LF) Productivity:

- LFs spent 972 hours planning for SCSD interactions.
  - This was 19% of the total planning time (5,184 hours).
- LFs spent 529 hours in interactions with SCSD employees.
  - This was 9.5% of total interaction time (5,545 hours).
- Overall, LFs spent 15% of their time working with educators in SCSD.
- LFs spent approximately 10% of their time working with the Nevada Department of Education and other state committees in support of the Nevada Academic Content Standards.
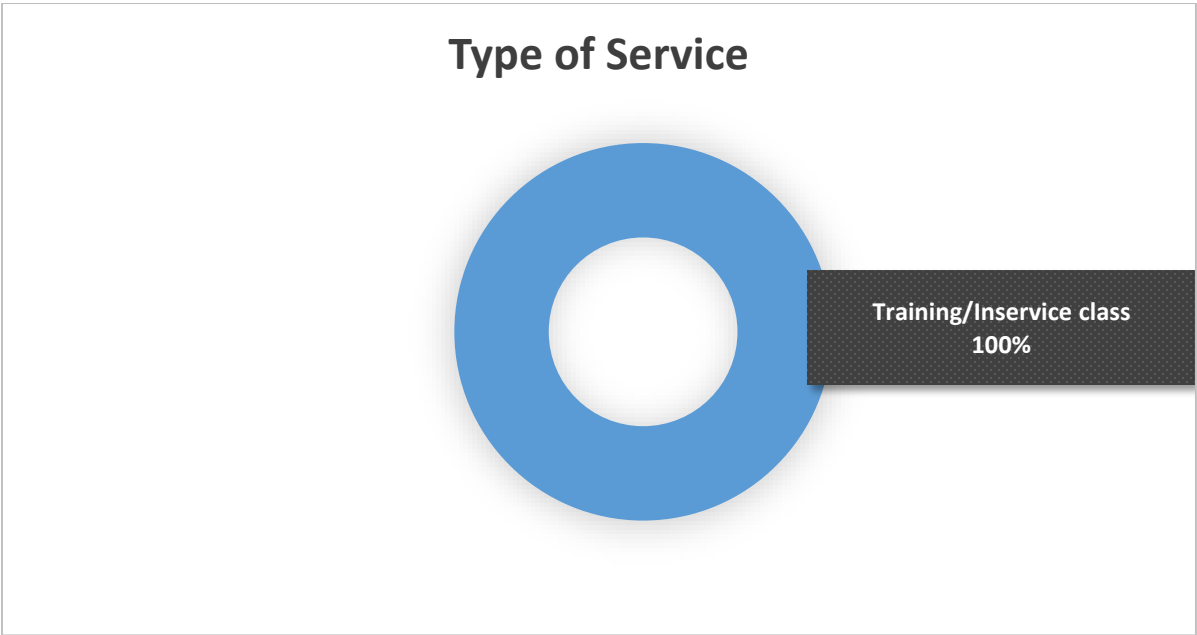
Figure 1: Types of Services Provided
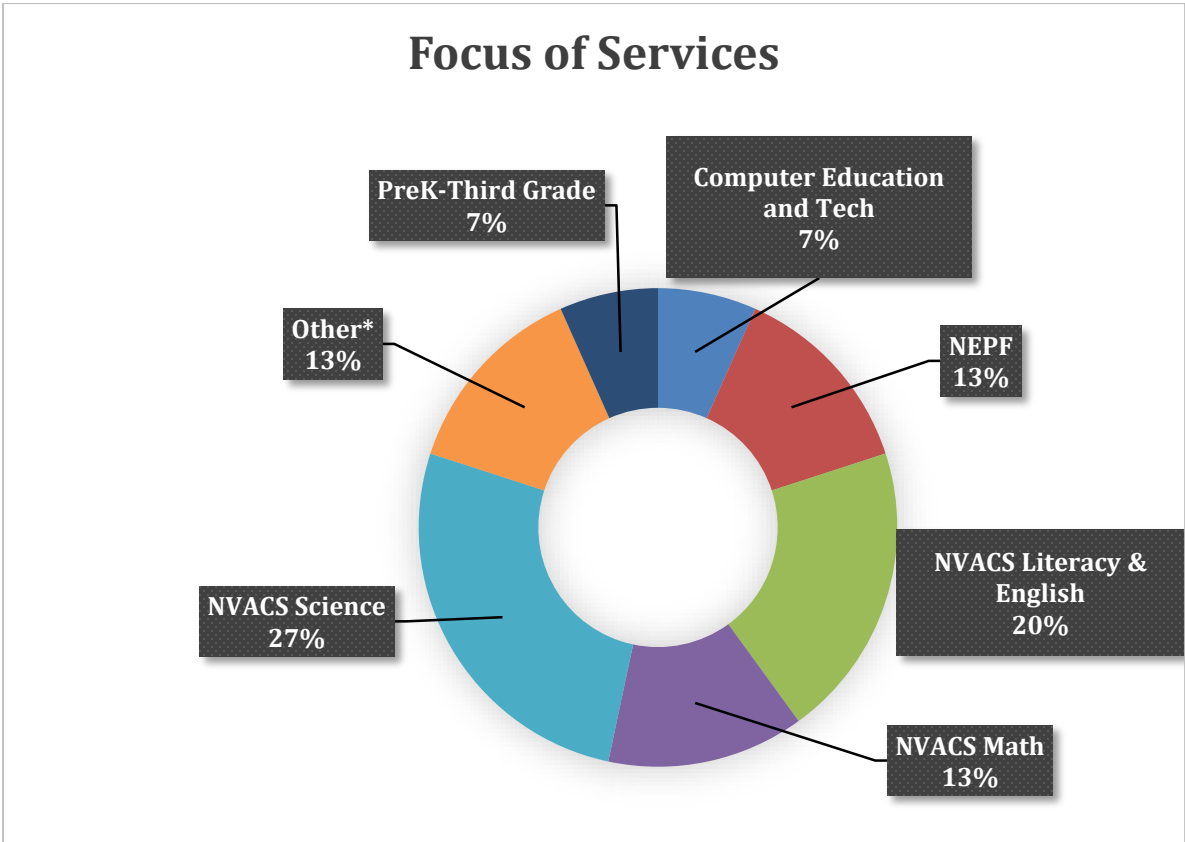
Type of Service

Training/Inservice class
100%

Figure 2: Focus of Services

Focus of Services

PreK-Third Grade
7%

Computer Education
and Tech
7%

Other*
13%

NEPF
13%

NVACS Literacy &
English
20%

NVACS Science
27%

NVACS Math
13%

Appendix K: Washoe County School District Services Summary

Washoe County School District is the largest school district in the region with 102 schools: 62 elementary schools, 15 middle schools, 15 high schools, two schools for special populations, and eight charter schools. Washoe has 66% of the schools in the NWRPDP Region, which includes 154 schools.

Nevada Academic Content Standards (NVACS) in literacy (including writing) and math were the main focus of training, followed by PreK-third grade supports, NVACS social studies and science, and teacher leadership.

Participant Mean Ratings on Quality of RPDP Trainings

(Scale: 1 = not at all, 3 = to some extent, 5 = to a great extent)	WCSD	Region
The activity matched my needs	4.7	4.6
The activity provided opportunities for interactions and reflections	4.9	4.8
The presenter/facilitator's experience and expertise enhanced the quality of the activity.	4.9	4.8
The presenter/facilitator efficiently managed time and pacing of activities.	4.8	4.8
The presenter/facilitator modeled effective teaching strategies.	4.8	4.7
This activity added to my knowledge of standards and/or subject matter content.	4.8	4.6
The activity will improve my teaching skills.	4.8	4.6
I will use the knowledge and skills from this activity in my classroom or professional duties.	4.9	4.7
This activity will help me meet the needs of diverse student populations (e.g., gifted and talented, ELL, special education, at-risk students).	4.7	4.5

Number of Educators Trained by NWRPDP

	Unduplicated	Duplicated
ES Teachers	615	1187
MS Teachers	105	148
HS Teachers	103	153
Administrators	16	21
Others	83	128
Totals	922	1637

Washoe educators were 44.8% of the educators trained in the region (Using the Unduplicated regional count of 2059 educators).

Regional Learning Facilitator (LF) Productivity:
- LFs spent 2,178.5 hours planning for WCSD interactions.
    o This was 42% of the total planning time (5,184 hours).
- LFs spent 2,393.5 hours in interactions with WCSD employees.
    o This was 43% of total interaction time (5,545 hours).
- Overall, LFs spent 47% of their time working with educators in WCSD.
- LFs spent approximately 10% of their time working with the Nevada Department of Education and other state committees in support of the Nevada Academic Content Standards.

Figure 1: Types of Services Provided

Type of Services

- Consulting/Collaboration 2%
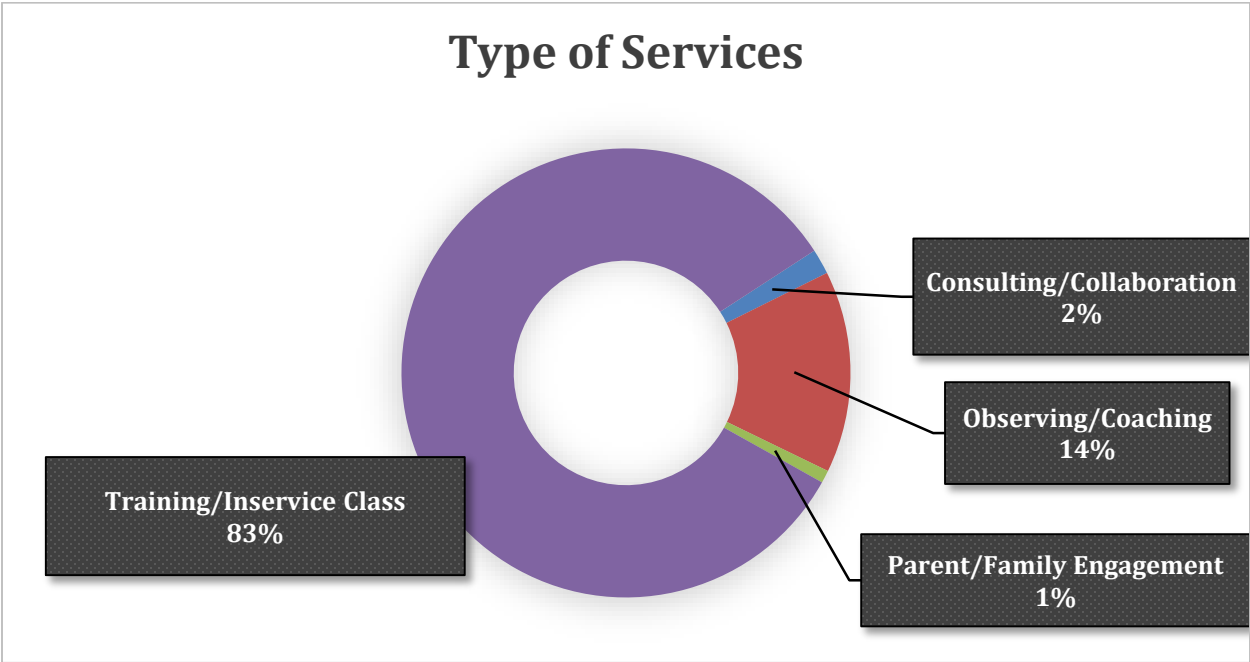- Observing/Coaching 14%
- Training/Inservice Class 83%
- Parent/Family Engagement 1%

Figure 2: Focus of Services

Focus of Service

- PreK-Third Grade 19%
- Parent/Family Engagement 1%
- Other* 1%
- NVACS Social Studies 6%
- NVACS Science 6%
- NVACS Math 20%
- Computer Education and Tech 1%
- Leadership 6%
- NEPF 1%
- NVACS Literacy & English 39%