STARS PRESCHOOL EVALUATION REPORT 2018

2017-2018 | Year One

Prepared by the Human and Community Services Division

Early Childhood Services Bureau

MONTANA DPHHS
Healthy People. Healthy Communities.
Department of Public Health & Human Services

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ABC Academy
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Lolo School District
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Ronan School District
Small Wonder Child Care
Stepping Stones Preschool
Troy School District

TABLE OF CONTENTS

STARS PRESCHOOL EVALUATION REPORT 2018 I
Acknowledgements i
Executive Summary iv
Findings v
Recommendations v
Section 1: Background and Overview 1
Early Childhood Education Landscape in Montana 1
National Overview 2
Montana's 2017 Legislature approves one time only funding in House Bill 639 3
STARS Preschool Pilot Defined 4
Section 2: Evaluation 9
House Bill 639 Report Criteria 9
Evaluation Design 9
Section 3: Demographic Data 16
Classroom/Program Demographics 16
Program Demand 31
Student Demographics 32
Section 4: Findings 33
Classroom Environments 33
School Readiness 36
Section 5: Summary of Findings 43
Section 6: Opportunities for Continued Focus 44
Section 7: Recommendations and Considerations for future 48
List of Figures 53

Executive Summary

Decades of research demonstrate the academic, health, and economic benefits of investing in early care and education. In recent years, states and the federal government have made significant investments to increase the quality of early care and education, as well as to increase access to high-quality learning opportunities. Under the leadership of Governor Steve Bullock, the state of Montana has made early childhood education a priority, working to ensure that all Montana children have the opportunity to be school ready upon entry into kindergarten.

In 2017, Governor Bullock worked with the Montana Legislature to secure $6 million to expand high-quality early childhood educational services for Montana's four and five-year old children. This one-time-only funding was provided for in House Bill (HB) 639 for the 2018-2019 Biennium.[1] In HB 639, the Department of Public Health and Human Services (DPHHS) was directed to:

- Create and support pilot programs to test multiple delivery models (including public, private, and mixed delivery preschool programs).
- Support preschool programs including start up and training costs.
- Ensure that the pilot programs are included in both rural and urban areas.
- File a report with the 2019 Legislature and present the report to the Education and Local Government Committee, the Legislative Finance Committee, and the Children, Families, Health and Human Services Committee.

To comply with HB 639, DPHHS created the STARS Preschool Pilot, solicited applicants and defined program criteria including length of day, staff qualifications, family engagement, and health and safety indicators. DPHHS received 47 complete applications representing public school, private preschool, Head Start, child care centers and child care family homes. Of the 47 applicants, a selection committee chose 17 grantees with 20 classrooms to participate in the first year of the Pilot.

DPHHS is pleased to present this report to the Montana Legislature summarizing the implementation and findings of the STARS Preschool Pilot after the first year. For this evaluation, the STARS Preschool Pilot relied on information from a variety of sources. These include: survey data from programs and parents, observation notes from onsite visits, quarterly fiscal and program reports, developmental and environmental assessments.

While there are limitations to an evaluation that only tracks results for one year, particularly in early childhood when many of the benefits are long-term, overall the findings indicate that the STARS Preschool Pilot and individual participating programs were successful in every sense.

[1] HB 639, 2017 Reg. Sess. (MT 2017). https://leg.mt.gov/bills/2017/BillPdf/HB0639.pdf

Findings

- **Demand**: In both rural and urban communities, families have a need for more high-quality, affordable preschool options. There were 47 applicants for STARS Preschool grant funding from all corners of the state, with many applicants noting that child care and/or preschool were either unavailable in their community or unaffordable for many families. In terms of enrollment, with 300 available preschool slots available, STARS Preschool Pilot programs self-reported more than 300 children (statewide) that were turned away or placed on a waitlist.

- **Effectiveness of multiple delivery models**: The STARS Preschool Pilot benefitted from a diverse group of programs. Of the 17 selected for funding, eight were public schools, seven were private community-based providers, one was a Head Start program and one was a public-private partnership (with the public school as the lead partner). No program type significantly outperformed another, but each type of program had unique strengths. Private programs excelled in ensuring a developmentally appropriate environment to support social-emotional learning and children enrolled in public school programs showed stronger growth on developmental indicators between Fall 2017 and Spring 2018.

- **School readiness**: Assessment data shows that all children enrolled in STARS Preschool benefitted academically, with a 21% overall increase in school readiness, as well as showing growth in social/emotional domains. Children with identified high needs, including those from low-income families, had more growth between Fall 2017 and Spring 2018, narrowing the gap between themselves and their peers.

Recommendations

To improve school readiness of Montana children, the STARS Preschool Pilot indicates a need for ongoing investment in public preschool programs to increase access for children with diverse family and demographic backgrounds. Future investments should:

- include multiple delivery models;
- support implementation of research-based curriculum;
- ensure developmentally-appropriate environments;
- provide opportunities for educator professional development and training; and
- continue to strengthen school-family partnerships and family engagement.

Moving forward, Montana should further explore health and safety standards for preschool, data infrastructure needs (including connecting early childhood and K-12 data), system alignment across child care, preschool and public K-12 schools.

STARS Preschool Evaluation Report 2018

YEAR ONE

Section 1: Background and Overview

Early Childhood Education Landscape in Montana

Stepping Stones Preschool

The state of Montana has been actively addressing high quality early childhood education for years. Governor Bullock has prioritized increasing access to high-quality early childhood education, including publicly funded preschool, so that all Montana children have the opportunity to be school ready upon entry into kindergarten.

The Best Beginnings Advisory Council (BBAC), established in 2011, is the state early childhood advisory council and collaborating entity for the early childhood system in Montana. The BBAC is housed within the Department of Public Health and Human Services (DPHHS) and aims to ensure all children have access to high-quality early childhood programs. The state advisory council also connects with 20 local early childhood coalitions across the state which work to increase coordination across early childhood systems in the state.

Montana's Best Beginnings STARS to Quality Program is a voluntary quality rating improvement system (QRIS). The QRIS aligns quality indicators with support and incentives for early childhood programs and early childhood professionals. Licensed early childhood programs can participate in the QRIS and earn up to five stars, indicating the level of quality.

In 2014, Montana was awarded a competitive federal Preschool Development Grant (PDG). The state received $10 million per year for up to four years to develop preschools for low- and moderate-income families in 16 communities. During the 2016-2017 school year, the state provided 763 new early childhood education slots, many of which were created through partnerships with Head Start and other early childhood programs in the state.[2]

The Montana Board of Public Education, in 2014, adopted a new rule that includes Early Childhood Education Program and Content Standards for school districts choosing to provide public preschool to children ages three to five. It also changes requirements for educator licensure to include an early grades endorsement (age three to grade three) and changes the educator preparation program requirements for the early grades endorsement.

The Montana Early Learning Standards, created in 2014, cover multiple domains including: approaches toward learning, physical wellbeing and motor development, language development, social-emotional development, and cognitive and general knowledge. The Montana Early Learning Standards are based on the combination of Montana's Early Learning Guidelines for children ages three to five and the Montana Guidelines for infants and toddlers.

In 2017, the Montana Office of Public Instruction received another competitive federal grant through the Striving Readers Comprehensive Literacy Program to support literacy skills among disadvantaged children. Fifteen percent of grant funding is distributed to preschool programs in the state.

National Overview

Discovery Place Child Care

[2] Friedman-Krauss, A. H., Barnett, W. S., Weisenfeld, G. G., Kasmin, R., DiCrecchio, N., & Horowitz, M. (2018). *The State of Preschool 2017: State Preschool Yearbook*. New Brunswick, NJ: National Institute for Early Education Research. http://nieer.org/state-preschool-yearbooks/yearbook2017

Decades of research exists on the effects of preschool programs on individual outcomes and on the economy, including the short-term impact on kindergarten readiness, medium-term impacts like third-grade reading outcomes, and long-term outcomes including post-secondary achievement, health and the return on investment for communities and states that support high-quality preschool. States, national think tanks, and researchers continue to publish valuable studies addressing brain development in the early years as well as school readiness success. Here are a few examples of rigorous and validated studies, as well as some higher-level summaries.

- In Brief: Early Childhood Program Effectiveness — Harvard Center on the Developing Child Early Childhood Education: Quality and Access Pays Off (Summary or Full Report) — University of Chicago School of Economics, 2016[3]
- The Current State of Scientific Knowledge on Pre-Kindergarten Effects — Brookings Institution, 2017[4]
- How Much Can High-Quality Universal Pre-K Reduce Achievement Gaps? — National Institute for Early Education Research, 2016[5]
- Impact of North Carolina's Early Childhood Programs and Policies on Educational Outcomes in Elementary School — Duke University, 2016[6]

According to the National Institute for Early Education Research (NIEER), the 2017 State of Preschool Yearbook indicates six states do not have a state funded preschool program. For 2017, Montana was listed as one of those states. Enrollment and state funding for preschool continues to grow across the country. The NIEER yearbook notes that, "Nationwide, state-funded preschool program enrollment exceeded 1.5 million children, 33 percent of 4-year-olds and 5 percent of 3-year-olds. State funding for preschool rose two percent to about $7.6 billion, an almost $155 million increase (adjusted for inflation), since 2015-2016. State funding per child was $5,008, a slight decline from 2015-16 adjusted for inflation".[7]

Montana's 2017 Legislature approves one time only funding in House Bill 639

Governor Bullock worked with the 2017 Montana Legislature to secure $6 million in funding over the biennium to expand high quality early childhood educational services for Montana's four and five-year old children. One-time-only funding was provided for a pilot via House Bill (HB) 639 for the 2018-2019 Biennium. HB 639 directed the Department of Public Health and Human Services to:

[3] *Early Childhood Program Effectiveness (InBrief)*. (2007). Retrieved from Center on the Developing Child : www.developingchild.harvard.edu

[4] Phillips, D., Lipsey, M. W., Dodge, K. A., Haskins, R., Bassok, D., Burchinal, M. R., & Weiland, C. (2017). Puzzling it out: The current state of scientific knowledge on pre-kindergarten effects–A consensus statement. *Issues in pre-kindergarten programs and policy*, 19-30.

[5] Friedman-Krauss, A., Barnett, W. S., & Nores, M. (2016). *How Much Can High-Quality Universal Pre-K Reduce Achievement Gaps?* Washington: Center for American Progress.

[6] Dodge, K. A., Bai, Y., Ladd, H. F., & Muschkin, C. G. (2017). Impact of North Carolina's early childhood programs and policies on educational outcomes in elementary school. *Child development, 88*(3), 996-1014.

[7] Friedman-Krauss, A. H., Barnett, W. S., Weisenfeld, G. G., Kasmin, R., DiCrecchio, N., & Horowitz, M. (2018). *The State of Preschool 2017: State Preschool Yearbook*. New Brunswick, NJ: National Institute for Early Education Research. http://nieer.org/state-preschool-yearbooks/yearbook2017

- Create and support pilot programs to test multiple delivery models (including public, private, and mixed delivery preschool programs).
- Support preschool programs including start up and training costs.
- Ensure that the pilot programs are included in both rural and urban areas.
- File a report with the 2019 Legislature and present the report to the Education and Local Government Committee, the Legislative Finance Committee, and the Children, Families, Health and Human Services Committee. The report must include the following elements:

  (1) address the demand for programs and the impact on current providers, with a specific focus on rural communities;

  (2) evaluate the benefits and disadvantages of various delivery models;

  (3) analyze advancements in kindergarten readiness for children participating in the programs;

  and;

  (4) make recommendations for the program.[8]

STARS Preschool Pilot Defined

Immediately following the 2017 Legislative Session, the Department of Public Health and Human Services began to design the STARS Preschool Pilot with the intent to provide state funded preschool for the onset of the 2017-2018 School Year. $3 million per year was allocated for the pilot, with $2.6 million dedicated directly to preschool programs. The remaining allocation was used to fund personnel at DPHHS and infrastructure costs including training, assessments, coaching, and materials in support of program implementation.

Criteria was developed and aligned with existing early childhood infrastructure and standards. One goal of the project was to maximize current services in the state of Montana while creating a model that supports and allows for flexibility supporting a mixed delivery model. Montana's Early Learning Standards,[9] Developmentally Appropriate Practices,[10] Title 10 Chapter 63 Public Preschool Program Standards,[11], and Health and Safety Guidelines[12] were all considered throughout the development of the pilot criteria.

Montana does not have predetermined health and safety criteria for preschool. Licensed child care providers delivering preschool are required to pass annual inspections by the Department of Public Health and Human Services Quality Assurance Division. Private preschools, along with preschools located in a public school setting

[8] HB 639, 2017 Reg. Sess. (MT 2017). https://leg.mt.gov/bills/2017/BillPdf/HB0639.pdf
[9] Montana Early Learning Standards Task Force. "Montana Early Learning Standards." http://www.mtecp.org/pdfs/Montana%20Early%20Learning%20Standards_DIGITAL%20v6(1).pdf
[10] Copple, C. &. (2009). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington: National Association for the Education of Young Children.
[11] Administrative Rules of Montana (2014) 10.63. https://bpe.mt.gov/Portals/119/PDF/VariousDocs/Chapter63.pdf
[12] MT DPHHS. "STARS Preschool Health and Safety Guidelines." (2017). https://dphhs.mt.gov/Portals/85/hcsd/documents/ChildCare/STARSPreschool/STARSPreschoolHealthandSafety.pdf

are not required by law to have health and safety inspections by an outside entity. At the beginning of the STARS Preschool Pilot, as the criteria for STARS preschool classrooms were developed so were pilot Health and Safety Standards. These Standards identify minimum health and safety expectations and are arranged into separate items:

1. Prevention and control of infectious diseases
2. Medication administration
3. Prevention and response to emergencies
4. Building and Physical Premises Safety
5. Transportation
6. Mandatory Reporting
7. Supervision
8. Discipline
9. Facility Records

Eligible programs included public schools, Best Beginning STARS to Quality early education programs ranked at STAR 3 or higher, Head Start programs, private preschool providers/schools, community-based programs, military programs, and tribal programs. Creative public-private partnerships were also encouraged.

A competitive application invited programs to apply for a preschool contract for a two-year period. Funding up to $150,000 per classroom each year was available to programs. Applicants were also required to supply a 10% match annually. The maximum classroom size was 18 and ratios were established to assure developmentally appropriate practice. Ratios could not exceed 10 children to every one adult.

Selection criteria considered the applicants ability to demonstrate the most effective implementation of a STARS Preschool classroom as well as allowing for a balance of delivery models and locations, including a mix of both rural and urban programs. Applicants received higher priority for serving children identified as high needs. Other criteria included:

- The qualifications and experience of the applicant and staff in planning, organizing and providing comprehensive child development services to families and children at the community level
- The program design and suitability of facilities and equipment proposed to be used in carrying out the program
- Cost-effectiveness of the proposed program
- The need for preschool services in the community served by the applicant

Program criteria also included providing preschool for a minimum of 5.5 hours per day or 28 hours per week. Programs were required to ensure compliance with teaching credentials, research based curricula, and alignment with the Montana Early Learning Standards.

To quickly get the word out about the grant opportunity, DPHHS and the Governor's Office announced the grant via press release, the STARS Preschool website, recorded informational webinars, and through collaboration with child care and education partners with established networks and listservs.

Online applications and program criteria were placed on the STARS Preschool website.

STARS Preschool received 47 complete applications representing public school, private preschool, Head Start, child care centers and child care family homes.

A selection committee was established to score and recommend funding based on the program criteria, delivery models, and locations. The committee was made up of representatives from the Governor's Office, the Montana State Legislature, the Montana Department of Public Health and Human Services, MEA-MFT, and the Early Childhood Project through Montana State University.

Of the 47 applicants, the committee selected 17 program grantees with 20 classrooms for year one. Three grantees were funded for more than one STARS Preschool classroom.

Figure 1: Montana Map of STARS Preschool Programs

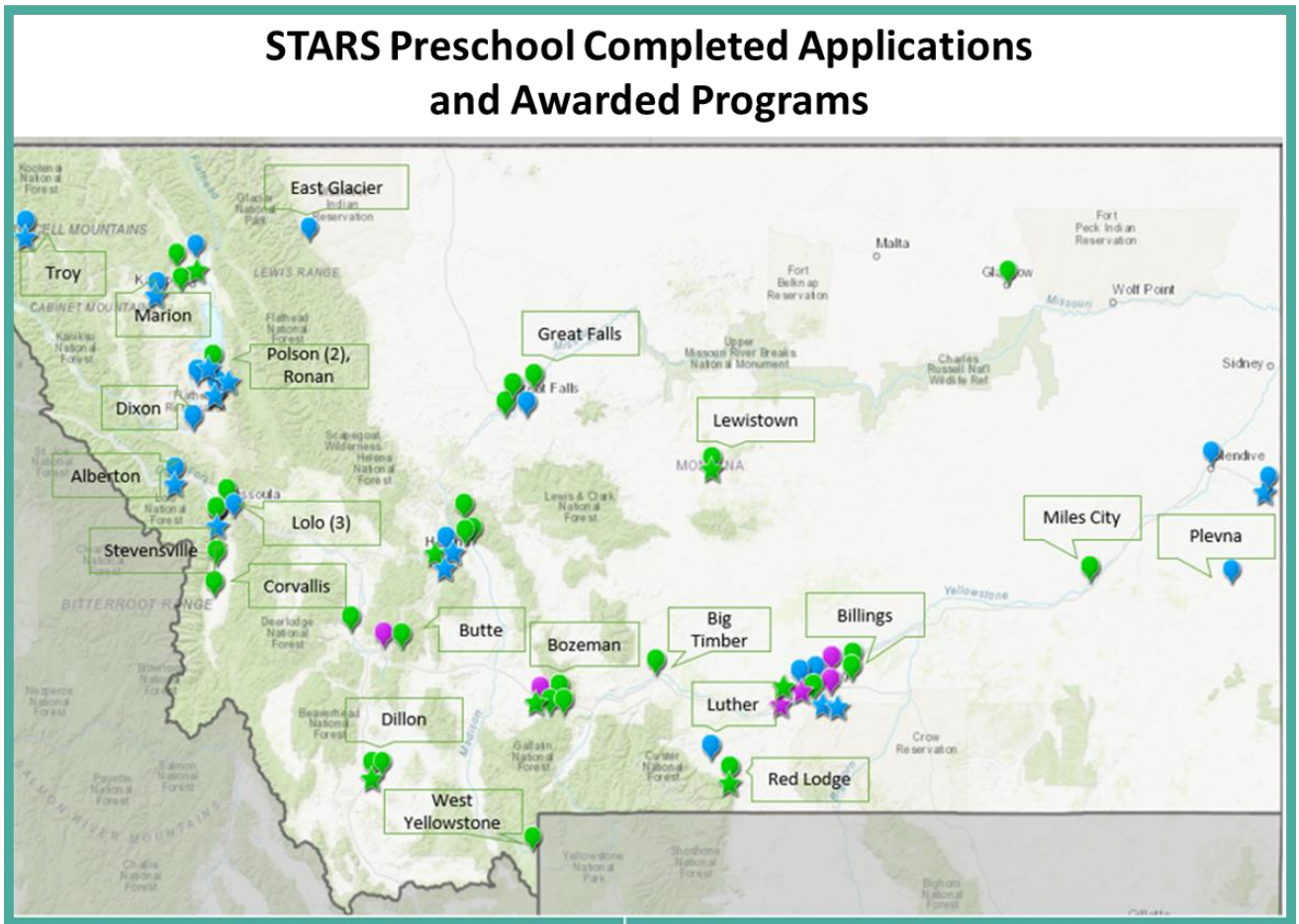


Figure 2: Programs that were selected

Of note, at the end of Year one, DPHHS identified there was enough funding to invite applications for Eastern Montana/HiLine representation. As a result, Wibaux Public School will be starting a new classroom for Year 2.

Infrastructure Support for Programs

Based on Montana's experience and national best practices, several elements were implemented to provide initial and ongoing support of the preschool classrooms. Coaching and other supports for success were embedded into the STARS Preschool criteria and program design. This included professional development, technical assistance, coaching, annual meetings, resource sharing, and onsite monitoring.

Coaching was made available for programs one to two times per month from individuals with demonstrated early childhood knowledge and previous experience in an early childhood classroom. Onsite support began with STARS Preschool classrooms in November 2017.

Private programs selected to be part of the STARS Preschool pilot project were all participants of the STARS to Quality, QRIS improvement system in Montana. The STARS to Quality Program has coaching support built in to its infrastructure, allowing the STARS Preschool classroom support to build on already established practices and relationships.

State staff and content experts provided professional development to increase awareness and understanding of the state's identified school readiness tools, social emotional development assessments, environmental assessments, and social emotional support strategies utilizing the Pyramid Model.[13]

Professional development offerings included:

- Ages and Stage Questionnaires®- Social Emotional- 2nd edition (ASQ®:SE-2)[14]
- Early Childhood Environmental Rating Scales® (ECERS-R™)[15]
- Developmental Indicators for the Assessments of Learning™ (DIAL-4™)[16]
- The Pyramid Model for Supporting Social Emotional Competence in Infants and Young Children[17]

Programs could also include other professional development or educational attainment within their grant budgets. Approximately half of the programs utilized funding to assist teachers to pursue education goals, including those pursuing the P-3 endorsement.

Onsite monitoring includes compliance checks with the STARS Preschool Health and Safety Checklists, as well as baseline evaluations using the ECERS-R™. Coaching strategies include support for programs to improve environmental scores, adapt curriculum, and/or meet health and safety standards as well as other program specific coaching.

In a year-end survey of classroom teachers, 94% reported they were given effective opportunities to grow professionally.

"Working with a coach has been beneficial in helping to grow professionally. Trainings have been beneficial as well."

ABC Academy, Lead Teacher

"I have loved the professional development opportunities throughout the year!"

Lolo Public School, Lead Teacher

"Coaches play an integral part of implementation of the STARS preschool. Through a strong relationship with teachers, coaches are able to support teachers who create an environment that fosters learning in a developmentally appropriate classroom."

Elly Driggers, Coach

"I've enjoyed this experience. Just being part of STARS Preschool has made me feel more professional. Allowing us to add professional growth opportunities in the budget also helps."

Discovery Place, Lead Teacher

[13] Fox, L., Dunlap, G., Hemmeter, M. L., Joseph, G. E., & Strain, P. S. (2003). The Teaching Pyramid: A Model for Supporting Social Competence and Preventing Challenging Behavior in Young Children. Young Children, 58(4), 48-52.

[14] Paul H. Brookes Publishing Co., Inc. (2018). ASQ®:SE-2. https://www.brookespublishing.com/product/asqse-2/

[15] FPG Child Development Institute. (2018). *Environment Rating Scales.*

[16] NCS Pearson, Inc. (2018). Developmental Indicators for the Assessment of Learning™—Fourth Edition (DIAL-4™). https://www.pearsonclinical.ca/en/products/product-master/item-76.html

[17] Fox, L. D. (2003).

Section 2: Evaluation

This section provides explanation to the approach to evaluation for the STARS Preschool Pilot. From the onset of pilot design, program criteria, implementation strategies, monitoring tools and surveys were built with the focus of gathering information and data regarding the goals outlined in HB 639.

House Bill 639 Report Criteria

The 2017 Legislature included requirements for evaluation as part of HB 639. The Legislature identified three primary elements for review:

1. Address the demand for programs and understand the impact on current providers with focus on rural communities
2. Evaluate the benefits and disadvantages of various delivery models
3. Analyze advancements in Kindergarten Readiness for children participating in the program

The STARS Pilot also identified these additional elements to include for evaluation:

- How effective was the program implemented?
- Did Montana expand access to preschool?

More specifically, the team wanted to analyze the following questions:

1. Does high-quality preschool impact school readiness?
2. Can high-quality preschool be offered in multiple settings and have equal impact on school readiness?
3. Are there benefits and challenges of different delivery models?
4. Are there certain conditions that affected outcomes such as teacher qualifications or environmental conditions?

Evaluation Design

The STARS Pilot collected information from a variety of sources. This includes:

- survey data from programs and parents
- observation notes from onsite visits
- quarterly monitoring and reports
    - fiscal
    - program
- pre and post data from the DIAL-4™
- pre and post data from ECERS-R™
- pre and post data from ASQ®:SE-2
- health and safety monitoring

Data obtained is used as part of the evaluation report; however, the true value of data and assessment is to inform the classroom and teacher about how best to support children in a high-quality, developmentally appropriate classroom. As such, data is used throughout the year in a quality improvement cycle at the state and program level.

Early Childhood Environment Rating Scales® (ECERS-R™)

The learning environment in an early childhood setting is key, in that a well-planned, developmentally appropriate environment serves as a third teacher to support experiential learning. ECERS-R™ is an environmental assessment that is currently used in the statewide QRIS system for childcare as well as the Montana Preschool Development Grant. STARS Preschool includes the use of this scale for consistency and depth of available data. ECERS-R™ assures reliable, valid, and comprehensive assessments. It is designed for groups of children between ages two and five years of age, and one assessment takes approximately three hours.[18]

The pilot includes review of learning and play spaces for children over time and uses the ECERS-R™ assessment as a primary data source. Programs were evaluated twice during the first year with ECERS-R™. The first assessment was considered a baseline assessment. Results of all assessments are shared with programs and programs are encouraged to use funds to make the changes necessary to ensure safety and developmentally appropriate environments.

The ECERS-R™ is divided into subscales. In Montana, the following subscales are reviewed:

1. Space and Furnishings
2. Personal Care Routines
3. Language-Reasoning
4. Activities
5. Interaction
6. Program Structure

[18] Cryer, D., Harms, T., & Riley, C. (2003). All about the ECERS-R. Lewisville, NC Pact House Publishing.

Figure 3: ECERS-R™ Subscales (Montana)[19]

Space and Furnishings	Personal Care Routines	Language-Reasoning
1. Indoor space 2. Furniture for routine care, play and learning 3. Furnishings for relaxation and comfort 4. Room arrangement for play 5. Space for privacy 6. Child-related display 7. Space for gross motor play 8. Gross motor equipment	9. Greeting/departing 10. Meals/snacks 11. Nap/rest 12. Toileting/diapering 13. Health practices 14. Safety practices	15. Books and pictures 16. Encouraging children to communicate 17. Using language to develop reasoning skills 18. Informal use of language

Activities	Interaction	Program Structure
19. Fine motor 20. Art 21. Music/ movement 22. Blocks 23. Sand/water 24. Dramatic play 25. Nature/science 26. Math/number 27. Use of TV, video, and/or computers 28. Promoting acceptance of diversity	29. Supervision of gross motor activities 30. General supervision of children (other than gross motor) 31. Discipline 32. Staff-child interactions 33. Interactions among children	34. Schedule 35. Free play 36. Group time 37. Provisions for children with disabilities

Ages and Stages Questionnaires® - Social Emotional-Second edition, ASQ®:SE-2

The STARS Preschool Pilot recognizes the importance of social and emotional development for preschool children. The pilot uses the **A**ges and **S**tages **Q**uestionnaires®-**S**ocial **E**motional-Second edition (ASQ®:SE-2). ASQ®:SE-2 is also part of the Best Beginnings STARS To Quality system, Montana Infant and Early Childhood Home Visiting, and is being used with Project Launch[20], a federally funded early childhood mental health pilot in the state.

ASQ®:SE-2 is a developmental screener designed to permit early identification of young children who need additional support or more comprehensive assessment of their social-emotional behavior. This tool promotes meaningful family engagement and includes parents in completing a questionnaire about their child's behaviors in the home setting. This information starts a process of reflection and communication whereby the program and family can work together to address not only the needs of the child, but the needs of the family.

Each STARS Preschool program received an ASQ®:SE-2 Kit to direct the process for Social/Emotional evaluation, communication with families, and follow-up. Professional development was offered to all STARS

[19] Montana DPHHS. "Early Childhood Environment Rating Scale Combined Notes (ECERS)." https://dphhs.mt.gov/Portals/85/hcsd/documents/ChildCare/STARS/MTNotes/CompleteVersionofAuthorsNotesforClarificationandMontanaNotesforECERS.pdf

[20] Montana DPHHS. Montana Project LAUNCH. https://dphhs.mt.gov/hcsd/childcare/montanaprojectlaunch

Preschool programs to effectively utilize ASQ-SE. Program staff received in-person training at annual meetings.

Parents were asked to complete the ASQ®:SE-2 in the fall and again in the spring. Data from the fall assessment is evaluated to determine intervention strategies. Follow-up actions are individually decided upon based on several considerations (setting/time, developmental, health, cultural). Follow-up actions might be any or all of the following, but are not limited to:

- Rescreening with the ASQ®:SE-2 questionnaire
- Share results with primary health care provider
- Provide parent educational materials
- Provide information about parenting classes or support groups
- Have another caregiver complete the ASQ®:SE-2
- Refer to early intervention/early childhood special education
- Provide interventions at home and in the classroom

The Developmental Indicators for the Assessment of Learning™ (DIAL-4™)

The DIAL-4™ identifies children who may be at risk of academic difficulty in identified performance areas. The pilot collected data on three performance areas: Motor, Concepts and Language.

DIAL-4™ Motor Items	DIAL-4™ Concept Items	DIAL-4™ Language Items
• Throwing • Stand, Hop, and Skip (Standing on One Leg, Hopping, Skipping) • Building (Tall Tower, Bridge, and Pyramid) • Thumbs and Fingers (Wiggling Thumbs, Twiddling Thumbs, Touching Fingers to Thumb) • Cutting (Straight Line, Curved Line, Dinosaur) • Copying • Writing Name	• Body Parts • Colors • Rapid Object Naming (Object Identification, Rapid Naming) • Rote Counting (Counting Forward, Counting Backward, Number Identification) • Meaningful Counting (Counting Blocks, Number Relationships) • Concepts • Shapes (Identifying Shapes, Sorting by Shape, Sorting by Color and Size)	• Personal Information • Articulation • Objects and Actions (Expressive Objects and Actions, Receptive Objects and Actions) • Letters and Sounds (Alphabet Song, Letter Naming, Letter-Sound Correspondence) • Rhyming (English only) and I Spy • Problem Solving

The DIAL-4™ assessment is administered by each program in the fall and spring. All programs received DIAL-4™ Kits and in-person training prior to the start of the school year to prepare them for administration.

The Demand for Programs and the Impact on Current Providers with Specific Focus on Rural Communities

The evaluation includes enrollment and wait list data of STARS Preschool classrooms, data from the Montana Preschool Development Grant, as well as wait list data of Head Start through the state. In addition, the parent survey included a question about access to high-quality preschool without STARS Preschool. Finally, the Early Childhood Services Bureau tracked anecdotal feedback through Child Care Resource and Referral Agencies related to current providers.

STARS preschool recruited applicants from across the state of Montana for the STARS Preschool Pilot. Of the 20 funded classrooms, twenty percent (20%) were from small communities in Montana, with population size less than 1000. Applicants were required to demonstrate a high need for preschool in their community to receive priority points in their applications. Forty-seven percent (47%) of the applications, especially in smaller towns, shared that in their communities, there were no other options for preschool and/or child care.

"Alberton has never had a preschool. Our community is home to many low socioeconomic families. Many kindergartners begin without spending any time in a school setting. Some have not been taught even the most basic of tasks and skills such as identifying shapes or colors."

Alberton Public Schools

Alberton Public School

Evaluate the benefits and disadvantages of various delivery models

The true strength of the pilot is the diversity of its participants, with programs serving as few as three and as many as 36 preschoolers. STARS preschool programs are in very rural communities, like Alberton and Marion, and more urban settings, such as Helena and Bozeman. STARS Preschools are found in public elementary schools, private family/group programs, child care centers, and Head Starts. Data obtained from assessment tools, parent surveys, and observations can be analyzed by program type and area served.

Analyze advancements in kindergarten readiness for children participating in programs

To assess for kindergarten readiness, the project selected a developmental screener with a rich variety of indicators, spanning across developmental areas. The Developmental Indicators for the Assessment of Learning, DIAL-4™ is the kindergarten readiness measure used by the Montana Preschool Development Grant(MPDG).

Children at or above the 16th percentile are considered ready for kindergarten, meaning that children leaving preschool in the "typically developing" range are considered ready to meet the next academic challenge. The 16th percentile is the lower tier of the "typically developing" range. Further, children's growth during the program year is analyzed. The pilot is most interested in those children identified by the DIAL-4™ in the fall as potentially delayed or at the 7th or lower percentile. Additionally, the pilot evaluates whether those children following a year of preschool have moved out of this category and are now typically developing.

The DIAL-4™ also incorporates feedback and information from parents and their perceptions of their child's readiness.

Program Effectiveness

STARS Preschool operates under a set of carefully developed criteria and agreements. These expectations guide the work of state leadership, onsite support and program staff. As part of the pilot, an evaluation plan was developed to evaluate project and program effectiveness, including program and fiscal monitoring. The pilot set up a reporting structure for programs to report expenditures quarterly to the state. Program monitoring includes attendance and high-needs identification information, parent and teacher surveys and program improvement plans.

Evaluation Limitations

The year one report attempts to present demographic data, baseline data and growth over a single year. It is important to know that the time period (academic school year Fall- Spring) and sample size of participating programs, students, and teachers can potentially create skewed outcomes, high or low. The pilot team took care not to single out any one area, child, or school if it would clearly identify a participant to protect anonymity.[21] As the program continues, the evaluation of STARS Preschool will be able to provide more robust data over time. To truly validate school readiness and interventions, Montana should consider investments in longitudinal data to connect early childhood information to K-12 data and beyond.

Because the state has not defined "kindergarten readiness," it is difficult to measure. Montana is not the only state to struggle with this, as there is no validated assessment tool for this age level. Finally, no assessment can provide the "whole" story for any child, particularly a young child, but this data will support the project to plan for changes in criteria or support in the future.

Ideally, developmental assessments and this report would have been conducted by outside evaluators. However, with limited time and resources and in an effort to reduce administrative costs of the pilot, the

[21] The sample size of Head Starts is small. In some cases, Head Start is identified, but in other cases throughout the report, Head Start is included in the public data to protect anonymity.

evaluation was completed by DPHHS staff and the DIAL-4™ was administered by classroom teachers, as opposed to formal and objective researchers.

Finally, the evaluation did not include a control group to compare interventions and/or data sets among two comparison groups of classrooms, teachers, and children.

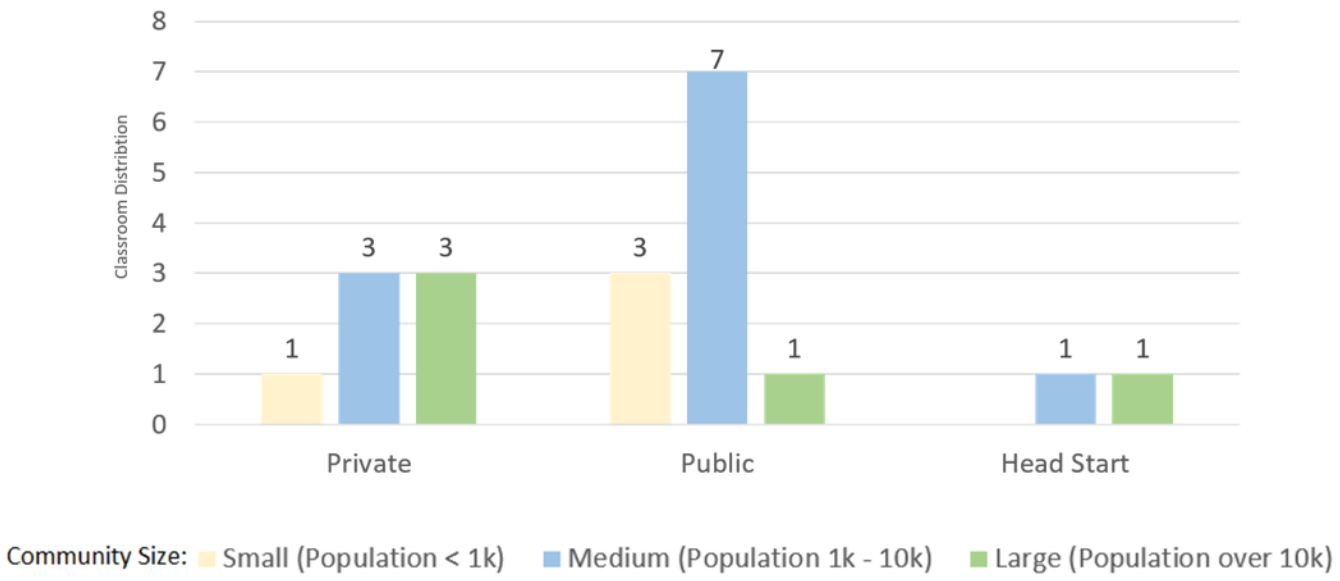
Ronan Public Schools

Section 3: Demographic Data

Classroom/Program Demographics

In addition to the specific locations identified in Figures 1 and 2 on pages 6 and 7, Figure 4 provides details related to preschool program locations by the size of the community. Based on this figure, four classrooms are in small communities with populations less than 1000, eleven classrooms are in midsize communities with populations between 1000 and 10,000, and five classrooms are in larger towns with populations over 10,000. During the third quarter of year one, the project determined there was enough budget remaining to solicit an additional STARS Preschool classroom. Wibaux Public School was the successful applicant and will be included in the year two evaluation.

Figure 4: Year One Classroom Distribution by Community Size



When looking at program types, there are several ways to categorize. In addition to Figure 2, on page 7, further distinction can be made related to private programs. Within the private programs, all programs are licensed child care programs. Of the seven private programs, two are licensed as a family or group child care program, which generally means that early childhood education and care happens in a teacher's private residence. Discovery Place in Bozeman, Montana started as a Family Child Care Facility, and has since increased its license to a Group Facility during the pilot, to accommodate more children.

Of the seven private programs participating in the year one pilot, their STARS to Quality level at the time of application and while participating, ranged from STAR Level 2* to STAR Level 4.

Within the public schools, just under seventy percent (70%) had no school-based preschool option within their district, and in some cases, like in Marion, MT, at the time of application, there were no preschools, (public or private) available within Marion or in surrounding communities. The closest available care was in Kalispell, 22 miles away. Depending on where a family lives, making a round trip twice per day could take between one to two hours.

The remaining districts may have had Head Start co-located in their school building or have a special education preschool program, defined by Part B of the Individuals with Disabilities Education Act (IDEA).

> "Because we had preschool and kindergarten in our building prior to STARS, we had some of the hurdles worked out (i.e. enrollment selection process, schedules, parent/student routines, etc.) as well as facilities and equipment to support the STARS implementation. We were able to essentially duplicate what we had developed with our Kinder Cub Kindergarten program"
>
> *Jill Miller, Principal, Eastgate*

Creative Approaches

HB 639 encouraged creative public-private partnerships as well. This is happening in Lolo, MT. The Lolo School District and the Lolo Preschool both submitted applications to offer STARS Preschool. The selection

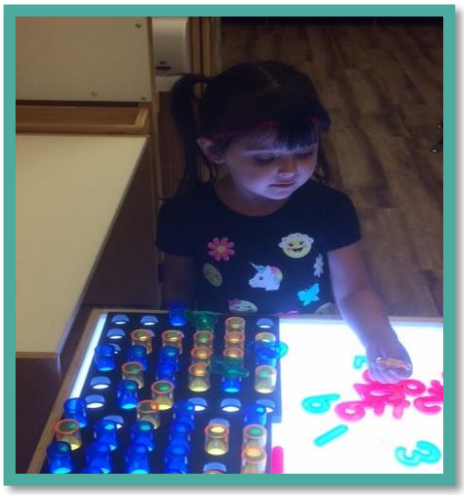
committee encouraged the two programs to identify a blended approach within the Lolo community. The two applicants collaborated to create the Lolo STARS Preschool Project, which provides preschool in the Lolo Elementary school with mentoring and support from the Lolo Preschool leadership staff. Program leadership from both programs worked together at the beginning of the pilot to create an atmosphere of learning suitable for preschool students. Through the year, Lolo School District called on the support of an established STAR 4 program for early childhood specific support. Lolo Public School principal, Shawn Kientz, called the relationship "a Professional Learning Community for the preschool teacher." Of particular interest, as detailed later in the report, Lolo Public Schools had zero identified health and safety concerns identified in inspections, the only one among their public school peers. The partnership model may have contributed to this success.

Although Head Start programs receive federal funds to provide comprehensive preschool services, there is a greater demand for services than most programs can provide with the available funding. Explorer's Academy, a Head Start Program in Billings and STARS Preschool grantee, is implementing a model of mixed delivery classrooms within the Head Start framework. At the time of application, Explorer's Academy offered two program options to families, a part-day program, providing four hours per day of preschool, and a full-day program, providing seven hours per day of preschool. Both options were only available for four days per week. The addition of STARS Preschool allowed for a five day per week option, with children attending from 8 AM-1:30 PM. Head Start also expanded their service delivery area, opening an additional STARS Preschool site in nearby Laurel, MT.

Helena Public Schools is also offering a creative model. Within the district, two elementary principals came together to write the proposal for a STARS Preschool classroom. The model provides Montessori preschool within the public school classroom while meeting STARS Preschool criteria. The preschool classroom builds on the district's existing public Montessori elementary program.

At Explorers Academy working on numeracy at the light table and building multiple skills with blocks

Heidi Tussing, lead teacher at STARS Preschool classroom at Hawthorne Elementary, Helena Public Schools. She is facilitating a Montessori lesson with Montessori materials.

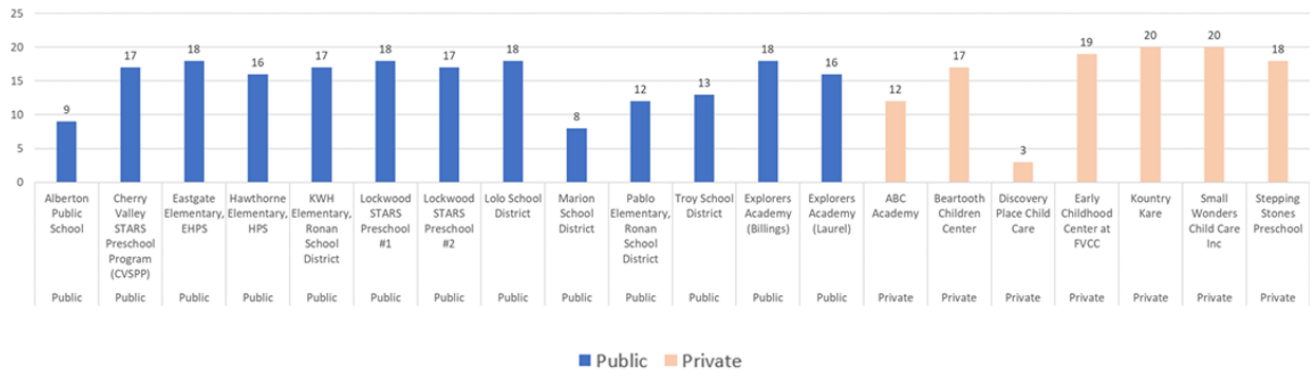


Enrollment and Classroom Sizes

Total enrollment of STARS Preschool classrooms statewide throughout year one was 329 children. Total enrollment at the end of the first year was 306 children, which accounts for some children exiting early and others starting late.

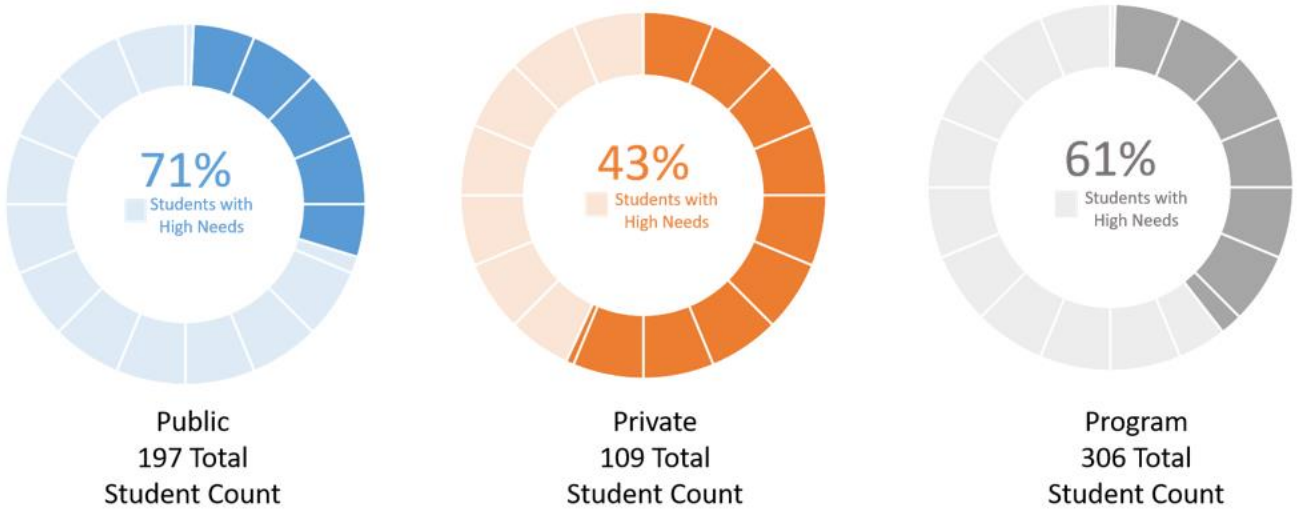
Within the preschool criteria, the maximum classroom size is 18 students. Classroom enrollment for STARS Preschool ranged from three students in a classroom to 20 students, with an average classroom size of 15 students. Classrooms smaller than 10 and above 18 were allowed with a waiver, after the applicant presented rationale to the STARS Pilot. Classrooms were also able to offer a STARS preschool classroom to mixed ages, but could only use pilot funds for four- and five-year old children. For private programs, the average enrollment was 16 students. The average classroom size for public programs, including Head Start, was 15 students. One program served three children in the first year with plans to expand to 12 children in year two.

Figure 5: STARS Preschool Enrollment at the End of Year One



Classrooms were also encouraged to dedicate at least twenty-five percent (25%) of their enrollment to children identified as having high needs. For the purposes of the pilot, high needs were defined to include low income, children receiving special services, children who are engaged in mental health services and supports, children who are enrolled tribal members, children of teen parents and children who are homeless or at risk of being homeless. It is also important to note that children could fall into more than one high needs classification. Children were considered high needs based on enrollment/participation in a program or service, parent information, or information obtained by the program itself. In year one, sixty-one percent (61%) of children identified in one or more high needs category. Figure 6 provides further detail. Please note that Head Start data is included in the public data.

Figure 6: Year One Student Enrollment by Program Type
Percent of Students Identified With High Needs



While maintaining small class sizes is an integral part of a developmentally appropriate classroom, so is having small child-teacher ratio. This is important to assure positive instructional opportunities and classroom management. STARS Preschool criteria indicated that classrooms must maintain a ratio of one teacher to ten children, consistent with national performance standards, Board of Public Education rule and child care licensing rules in Montana. In the event a classroom has more than ten children, an assistant teacher or aide must be present to meet the child-teacher ratio. All programs maintained the ratio. Figure 7 below, shows the ratios met by each STARS Preschool classroom.

Figure 7: Teacher-Student Ratio

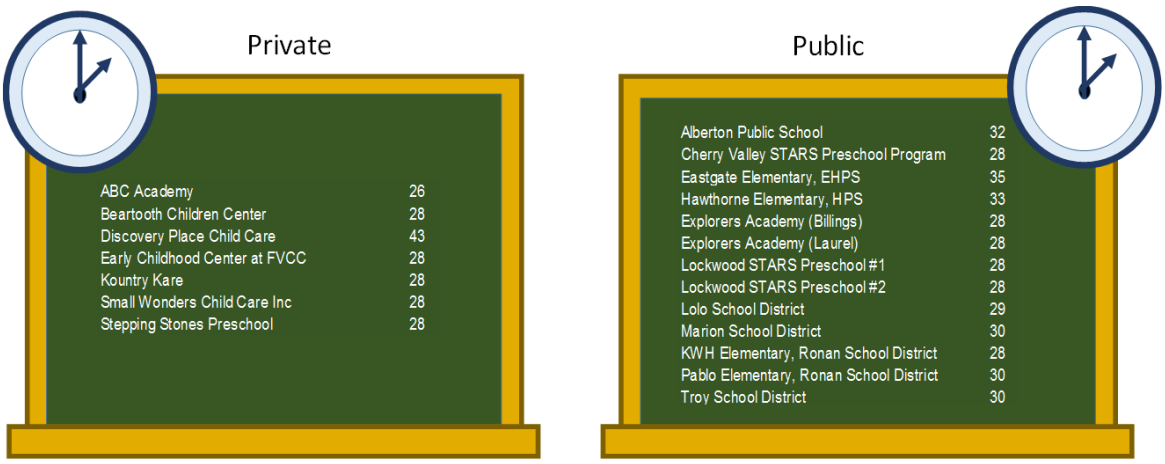
Teacher : Student Ratio
Average Program Wide 1:7

Private		Public	
ABC Academy	1:6	Alberton Public School	1:3
Beartooth Children Center	1:6	Cherry Valley STARS Preschool Program	1:9
Discovery Place Child Care	1:3	Eastgate Elementary, EHPS	1:9
Early Childhood Center at FVCC	1:5	Explorers Academy (Billings)	1:6
Kountry Kare	1:10	Explorers Academy (Laurel)	1:8
Small Wonders Child Care Inc	1:10	Hawthorne Elementary, HPS	1:8
Stepping Stones Preschool	1:9	Lockwood STARS Preschool #1	1:9
		Lockwood STARS Preschool #2	1:9
		Lolo School District	1:5
		Marion School District	1:4
		KWH Elementary, Ronan School District	1:9
		Pablo Elementary, Ronan School District	1:6
		Troy School District	1:7

Length of Day and Instructional Hours

As part of the program criteria, classrooms were required to provide a minimum of 5.5 instructional hours per day, or 28 hours per week.[22] The criteria also allowed for a waiver, if a demonstrated alternative solution was in place. This flexibility is especially important for rural communities, where time spent in transit can be long. Figure 8 shows the number of hours per week for participating classrooms.

Figure 8: Classroom Hours per Week



Throughout the pilot, length of the school day was a topic of debate. Some programs and parents raised concerns about whether children were ready for more than a half-day in a structured preschool environment and in rural communities, transporting children into town four or five days per week was a barrier for some families. On the other hand, many parents who work full time are not able to provide aftercare or transportation to another program for the remainder of their work day. The Lolo Preschool/Public School partnership had a creative solution to this challenge. Lolo Preschool offered aftercare to several of the preschool students, allowing the two programs to coordinate care and transportation. This model keeps children in a high-quality, developmentally appropriate environment for the full day and kept staff from both programs in communication about individual child needs.

Curriculum Models

The implementation of a comprehensive, research-based curriculum increases program effectiveness and child outcomes. The STARS Preschool criteria states that "classrooms must use a research-based curriculum. This curriculum must address all the domains of learning and align with the Montana Early Learning Standards as well as Developmentally Appropriate Practice".[23]

Programs had flexibility to use the research-based curriculum of their choice. In year one, the STARS Preschool programs utilized five different research-based curricula.

- Creative Curriculum®[24] (12 classrooms)

[22] Transportation could not be included in the classroom hours per day
[23] Montana DPHHS. "STARS Preschool Criteria." https://dphhs.mt.gov/Portals/85/hcsd/documents/ChildCare/STARSPreschool/STARSPreschoolCriteria.pdf
[24] Dodge, D. T., Colker, L. J., Heroman, C., & Bickart, T. S. (2002). The creative curriculum for preschool.

- Opening Worlds of Learning (OWL)©[25] (5 classrooms)
- High Scope®[26] (1 classroom)
- Big Day®[27] (1 classroom)
- Montessori Method[28] (1 classroom)

Below is a brief description of each curriculum.

The Creative Curriculum® for Preschool is a set of classroom resources that includes two types of tools: The Foundation volumes that provide the knowledge base of the curriculum and the Daily Resources, which offer step-by-step guidance for how to incorporate learning experiences that address 38 objectives for development and learning.

Opening the World of Learning (OWL)©: A Comprehensive Early Literacy Program focuses on six thematically organized units: Family, Friends, Wind and Water, The World of Color, Shadows and Reflections, and Things That Grow. The content of each unit is built around a daily routine within an activity center.

HighScope® is based on the idea that children and adults learn best through hands-on experiences with people, materials, events, and ideas. Each individual program consists of a system of teaching practices, curriculum content areas for each topic and age group, assessment tools, and a training model.

Big Day for PreK® is organized into eight themes and includes five key elements of success: big experiences, meaningful conversations, best children's literature and nonfiction, innovative technology, and comprehensive program.

The **Montessori Method** of education, developed by Dr. Maria Montessori, is a child-centered educational approach based on scientific observations of children from birth to adulthood. It is an approach that values the human spirit and the development of the whole child—physical, social, emotional, cognitive. While there are many components that are integral to quality Montessori implementation, the American Montessori Society recognizes 5 core components as essential in Montessori schools—properly trained Montessori teachers, multi-age classrooms, use of Montessori materials, child-directed work, and uninterrupted work periods. Fully integrating all of them should be a goal for all Montessori schools.

Some programs purchased curriculum as part of startup materials, while others continued or expanded their existing curriculum, resulting in a wide range of implementation levels. Through classroom observations in year one of the project, it became clear that teachers would benefit from a greater focus and more support for curriculum implementation.

Programs report the implementation of curriculum has improved their teaching practices and eighty-six percent (86%) of teachers reported feeling that child outcomes have improved because of curriculum use.

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[25] Schickedanz, J., & Dickinson, D. K., & Charlotte-Mecklenburg Schools. (2005). *Opening the World of Learning: A comprehensive literacy program*. Parsippany, NJ: Pearson Early Learning.

[26] HighScope Educational Research Foundation. (2018). *HighScope Preschool Curriculum*. https://highscope.org/preschool

[27] Houghton Mifflin Harcourt. (2015). *Big Day for PreK: Make Learning Bigger*. https://www.hmhco.com/products/big-day-pre-k/

[28] American Montessori Society. (2018). *Introduction to Montessori Method*. https://amshq.org/Montessori-Education/Introduction-to-Montessori

Figure 9: Curriculum

"This was the biggest strength added to our program this year."

Kountry Kare, Administrator

"Our teaching is very intentional now, we have specific skills we are working on. I feel it is well rounded and all inclusive."

ABC Academy, Lead Teacher

"Having a research based curriculum to follow has ensured that our students are exposed to all areas of learning and has improved the outcome of our students."

Stepping Stones Preschool, Lead Teacher

Program survey data also shows that teachers are able to provide play-based experiences, interact with children in developmentally appropriate ways, and meet individual needs while implementing curriculum.

Pablo Public Schools

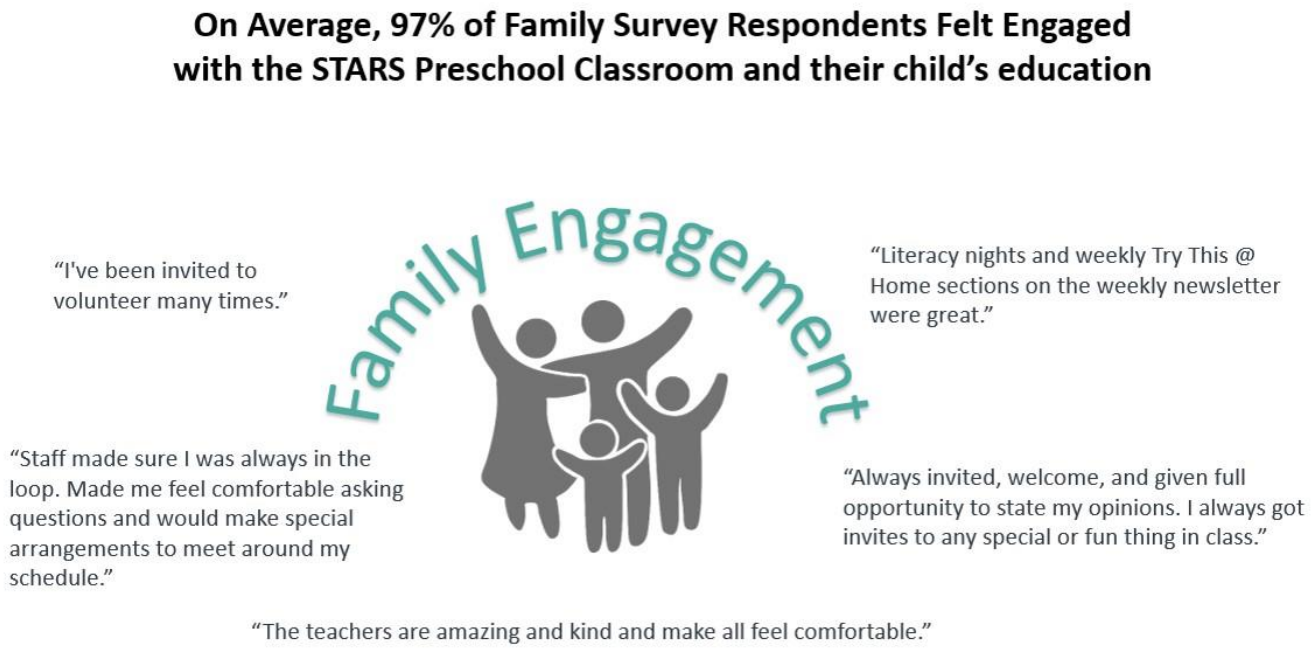
Family Engagement

While only half of all programs reported having a formal family engagement plan, all programs offered a parent-teacher conference at least twice during the first program year. Thirty-nine percent (39%) of interactions with families were home visits. Programs also offered a variety of other events for families including:

- Screening/roundup
- Open house
- Literacy night
- Assessment meeting
- Special occasion meals together

Programs generally consider communication strategies such as newsletters as the primary strategy used to establish and build relationships with families. Some programs discussed inviting parents into the classroom to volunteer and/or seeking opportunities for feedback from parents.

Figure 10: Survey Respondents Quotes on Engagement



There is potential for improvement in family engagement. Some responses from the teacher surveys indicated that "we could do better" and while families felt comfortable with the level of communication between school and home, just sixty-three percent (63%) of parents surveyed felt welcome in their child's classroom.

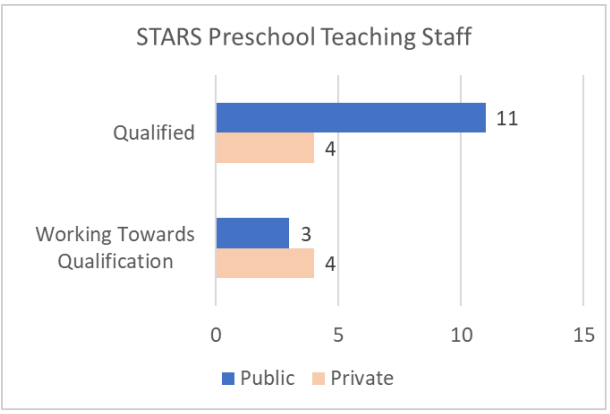
Staff Characteristics

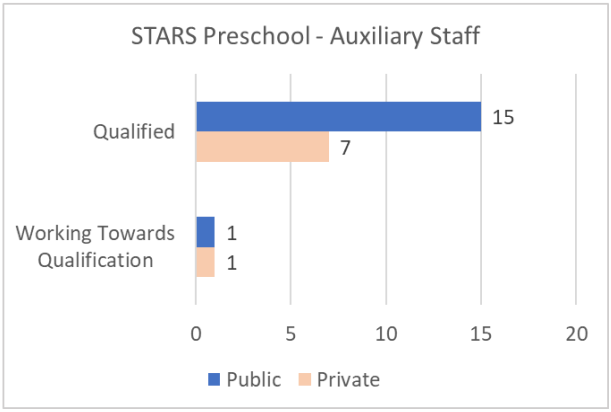
STARS Preschool criteria includes qualifications for staff in the classrooms. For public school classrooms, lead teachers must be licensed and endorsed in accordance with the Board of Public Education's educator licensure standards[29] and Preschool Program Standards.[30] These standards indicate that a teacher must have a license with an early childhood (P-3) endorsement, or a provisional license with a plan to achieve the required early childhood licensure. For private program settings, the lead teacher must have a Bachelor's degree with 20 credits in early childhood education. Because of the start-up nature of the STARS Preschool Pilot, the criteria included a provision in which the teacher could be mentored by a qualified teacher, if they were still working on meeting the teacher standards.

Auxiliary staff, typically aides, assistant teachers, or paraprofessionals, must have 60 credits from an accredited higher education program or an Associate's degree in a related field, with early childhood education experience.

Stepping Stones Preschool

Figure 11: Number of Teachers by Qualification Category





[29] Administrative Rules of Montana (2013) 10.55. http://mtrules.org/gateway/ruleno.asp?RN=10%2E55%2E707
[30] Administrative Rules of Montana (2014) 10.63. https://bpe.mt.gov/Portals/119/PDF/VariousDocs/Chapter63.pdf

In program staff surveys, seventy-two percent (72%) indicated that teachers have pursued additional education to attain higher credential levels, including the P-3 early childhood endorsement, or a Bachelor's or Master's degrees.

Often in the field of early childhood, pay equity is an issue. This is largely due to a traditional early childhood model which is heavily reliant on parent fees. In the pilot, salaries and fringe reflected fifty-four percent (54%) of the total allocation for program budgets. The average amount for lead teacher salaries and fringe among all programs was reported at $44,745. The average amount for auxiliary staff among all programs was $24,763. The Center for the Study of Child Care Employment[31] found that the median hourly wages for Montana's early childhood workforce were $13.90 for a lead teacher and $9.84 for an auxiliary teacher. These medians do not include fringe benefits, because in many cases, early childhood staff in private programs do not receive employee benefits. Figure 12 shows a rough comparison of the STARS Preschool salary and the broader early childhood workforce data. As a further comparison, the median wage in Montana for a Kindergarten teacher is $29.64 per hour.[32]

Figure 12: Median Wage in Montana vs. STARS Preschool Pilot Average Wage

As the state continues to refine program data collection, there may be other elements to gather from teaching staff such as: full time equivalent (FTE) status, whether wages include benefits, and how wages compare among program types.

Budget

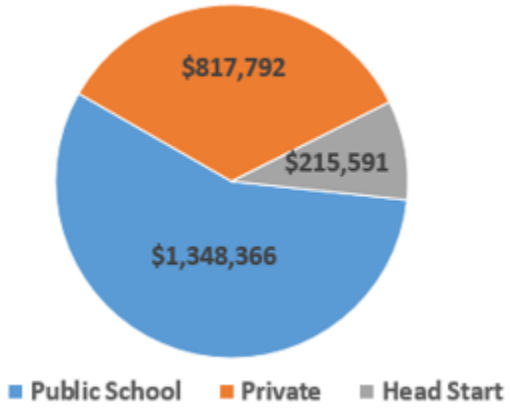
House Bill 639 provided $3 million annually for the pilot. The majority of funds, $2.6 million, flowed directly to communities, while $400,000 remained at DPHHS for administration and program support. Program support includes coaching, professional development, assessments and evaluation support.

[31] Whitebook, M., McLean, C., & Austin, L. J. (2016). Early Childhood Workforce Index, 2016. *Center for the Study of Child Care Employment, University of California at Berkeley*. http://cscce.berkeley.edu/early-childhood-workforce-2018-index/
[32] Ibid

Program awards ranged from $27,000 to $150,000. The average award amount was $121,000 in year one. As we look to year two, budgets may be adjusted, but no classroom will exceed the $150,000 threshold. Participating programs will have a better projection of budget needs after the initial year of implementation.

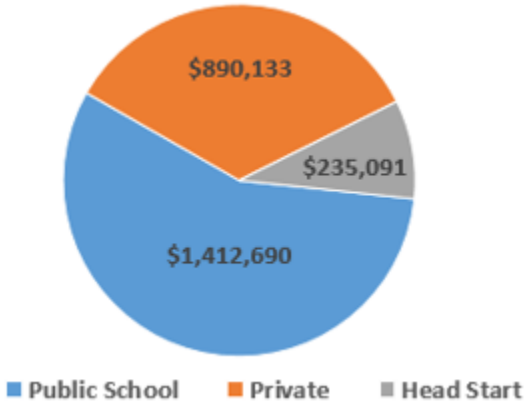
Figure 13 provides a breakdown of preschool funding by type of program for year one. Sixty-five percent (65%) of the funding supported public schools and thirty-five percent (35%) supported private programs.

Figure 13: Initial Budget by Program Type Year One



To assist with startup costs and to help programs respond to needs identified in environmental and health and safety assessments, $200,000 was set aside for capital expenditures. This funding was used to support curriculum enhancements or environmental changes, including outdoor environments and was not included in the initial program budgets.

Figure 14: Year One Actual Expenditures by Program Type

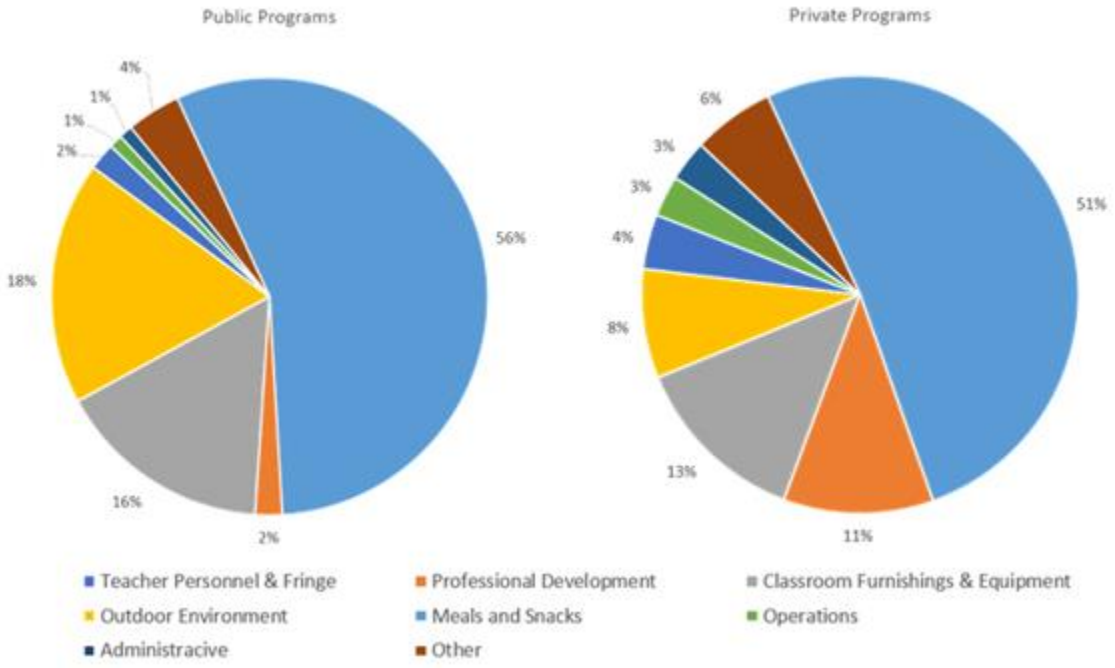


Applicants were also required to commit to matching ten percent (10%) of their grant award amount. All programs met or exceeded this match requirement, with a total of $376,000 provided in matching funds.

Figure 15 on page 30 shows the proportion of the budget allocated by category, for both public (including Head Start) and private programs. In both the public and private budgets, more than half of the budget supported personnel. The next largest category of spending was in the area of environments, both in the

classroom and outdoors. All programs were required to limit administrative/indirect expenses to no more than five percent (5%) of their total budget.

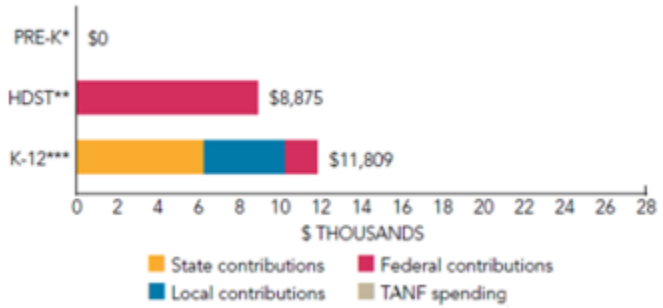
Figure 15 Expenditures by Category



Expenditure per student

The National Institute for Early Education Research (NIEER), analyzes state investments in preschool in an annual yearbook. The following figure is an illustration of their analysis of preschool, Head Start and K-12 spending in Montana for 2017.[33]

Figure 16: Spending Per Child Enrolled



Based on the annual allocation of $3 million, the spending per child for the STARS Preschool Pilot is $9,572. This includes direct program costs, as well as administrative funding at the state level. The cost per child based

[33] Friedman-Krauss, A. H., Barnett, W. S., Weisenfeld, G. G., Kasmin, R., DiCrecchio, N., & Horowitz, M. (2018). *The State of Preschool 2017: State Preschool Yearbook*. New Brunswick, NJ: National Institute for Early Education Research. http://nieer.org/state-preschool-yearbooks/yearbook2017

only on the allocation to programs in the community is $8,294. The breakdown of spending per child by program type is in Figure 17.

Figure 17: Spending Per Child by Program Type

Program Type	Total Expenditures	Cost per child
Head Start	$235,091.00	$6,914.44
Private	$890,133.16	$8,166.36
Public School	$1,412,689.52	$8,666.81
Grand Total	**$2,537,913.68**	**$8,293.84**

Health and Safety Standards

All STARS Preschool classrooms are subject to health and safety inspections. Broad categories of the inspections include: prevention and control of infectious disease; medication administration; prevention and response to emergencies; building and physical premises safety; transportation; mandatory reporting; supervision; discipline; facility records. All programs were in full compliance with transportation and facility records and nine programs had zero findings of concern at the time of inspection. For those programs that did have findings, in many cases, concerns could be immediately addressed through development of written policies, improved storage of medications, posting poison control numbers, and adding outlet covers.

Within the category of Building and Physical Premises Safety, some areas of concern based on inspection reports include:

- *Any outdoor play area must be free from hazards. If play area is adjacent to a hazardous area, it must be enclosed with a fence at least four feet high without spaces greater than four inches in diameter. The play equipment should be in good repair and age/developmentally appropriate. Trampolines are prohibited.*
- *Outdoor play areas shall be designed so that all parts are always visible and easily supervised by staff.*
- *Playground shall not be shared with younger or older children at time of play.*

All but one public preschool program struggled to meet outdoor environment expectations in accord with the Health and Safety Inspection. This trend also occurred with the environmental rating scale assessments as well. This makes sense as many public schools have playgrounds designed for children age five and older. As public schools continue to expand their educational service to younger children, playgrounds may need improvements to meet the developmental needs of younger children. Many within the STARS Preschool Pilot

have already begun to improve their outdoor play spaces. Below is an example of playground improvements that have begun in Ronan. Ronan also plans to install a fence.

Ronan School District (Pablo Elementary)

"The new playground environment funded through the STARS pre-school grant will provide years of use by the students at K. William Harvey who are in pre-school, special needs pre-school and kindergarten. The equipment will also be beneficial to the parents of young children who come to play at the school during non-school hours."

Ted Madden,
Principal, K. William Harvey Elementary

Program Demand

STARS Preschool applicants were asked to provide information about the community need for publicly-funded preschool and many applications, both successful applicants and some that were not funded, demonstrated a compelling need. Some applicants noted they were in child care deserts, others mentioned a lack of Head Start or private preschool options in communities. Others highlighted the cost of care and lack of available slots in private programs as a barrier for many families seeking high-quality child care and preschool across the state.

"Our current projection for the 2017-2018 school year has a total of 38 children on our enrollment wait list and 21 of those being 4 year old children who would potentially quality for this STARS Preschool Classroom opportunity."

Small Wonders Child Care

"The only other preschool in Dillon operates only a few hours, three mornings a week, and is affiliated with the Lutheran church. If Stepping Stones Preschool were not in operation, residents of Beaverhead County would have to travel over 60 miles to Butte to access a high quality preschool program. Until 2014, Beaverhead County had a Head Start program that served many local families, but its closure has forced many in the community to lose access to quality preschool, whereby increasing the need for such services."

Emily Alberi,
Director of Stepping Stones Preschool

Demand for publicly funded preschool in the state of Montana requires a broader conversation, beyond STARS Preschool. Data exists representing STARS Preschool, the Montana Preschool Development Grant, and Head Start. STARS Preschool funded 20 classrooms and served a little over 300 children. There were another 300 children on waiting lists, according to self-reported data from STARS Preschool programs. Additionally, Head Start reports wait list information annually to the Montana Head Start State Collaboration Office. The most recent report indicated that Head Start was serving more children than they receive federal funding for, and had a waitlist of 685 children. The Montana Preschool Development Grant is starting their fourth and final year of the federally funded grant. This grant had 22 sub-grantees and served 1000 eligible four-year

olds the 2017-2018 school year. If those classroom slots cannot be sustained beyond the federally funded grant, there will be a gap in the number of children receiving preschool services in Montana in the future.

Evaluating the data that was received via the parent survey, had STARS Preschool not been funded in 2017/2018, parent survey results indicate:

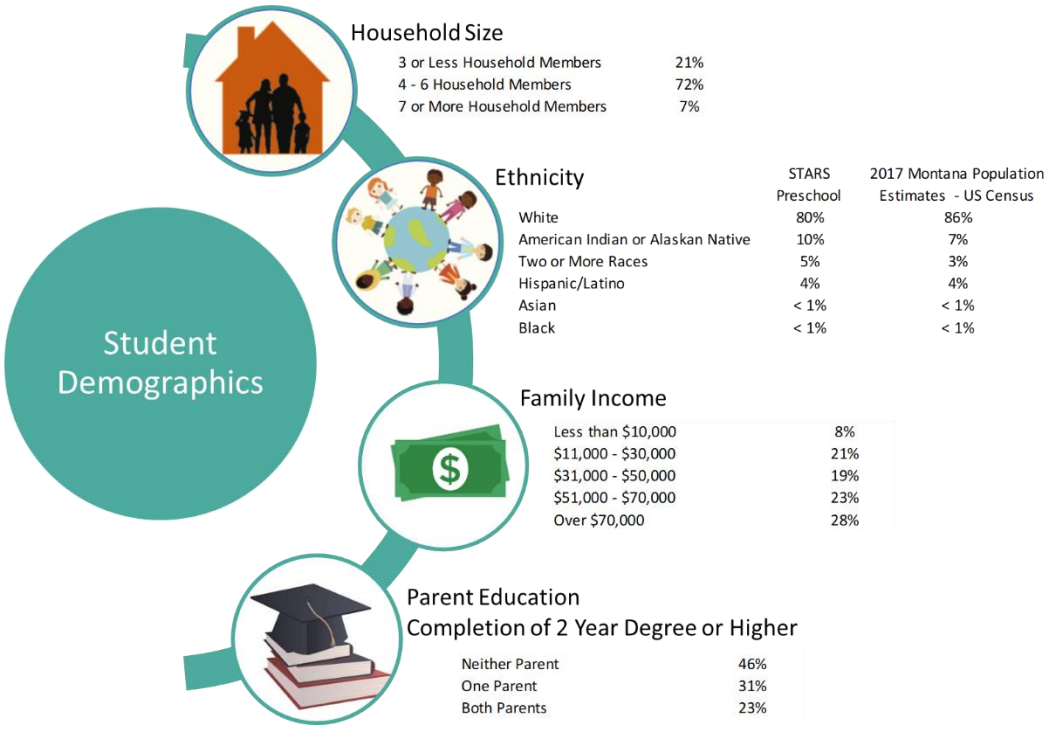
- Approximately one-third (1/3) of children who participated in the STARS Preschool program, would not have had any quality preschool exposure.
- Over one-half (1/2) would have been stretched to find the resources to pay for child care or preschool experience with their personal family budgets.

Student Demographics

Student and family demographic information is based largely on voluntary survey data, with eighty-three percent (83%) of parents participating in the survey. This survey data captures ethnicity, household size, educational levels of parents, and family income level. This survey data also helped to identify children who met the criteria for one or more high needs categories.

At a glance, eighty percent (80%) of the student population identified as White and seventy-nine percent (79%) of children live in a household consisting of four or more family members. Children who come from larger households tend to live in families with higher incomes, and children who come from families with higher incomes tend to have parents with higher education. It is difficult to correlate race to any other demographic given the small sample size and given that the preschool program essentially mirrors race demographics for the state of Montana.

Figure 18: STARS Preschool Student Demographics



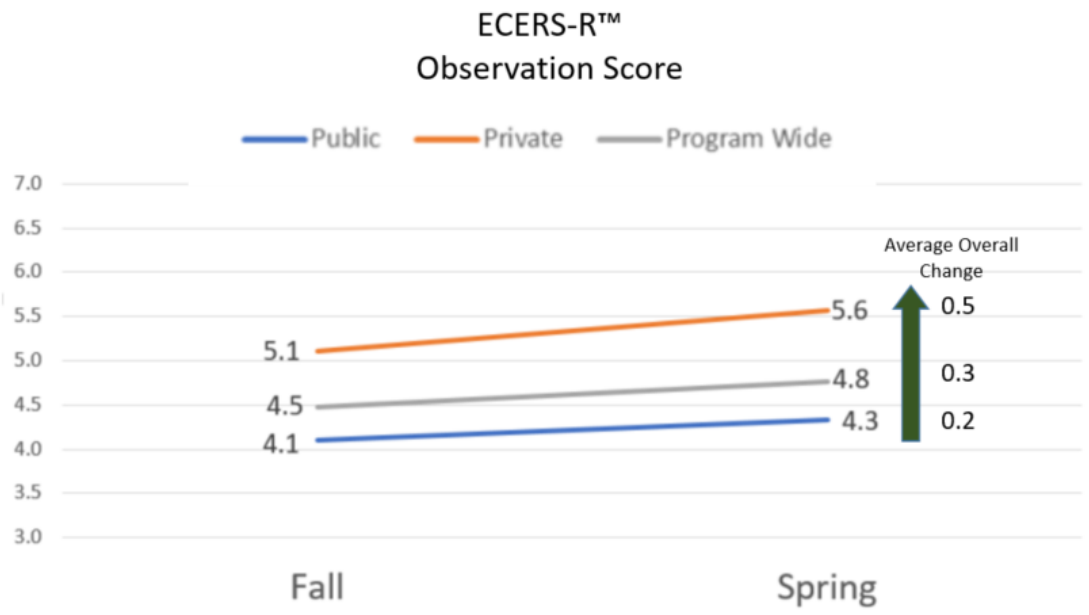
Section 4: Findings

Classroom Environments

All classrooms completed baseline assessments early in the school year and follow-up assessments at the end of the school year. While both public and private programs made only slight improvements, this is not unexpected given the short amount of time to improve environmental conditions. Due to timing of assessments, some programs may have had only four months to address baseline findings. Figure 19 below indicates the overall trend from baseline to spring assessments. Because only private providers already participating in the state's STARS to Quality QRIS system were eligible for STARS preschool grants, the higher overall scores in private programs can likely be attributed to their previous experience with ECERS-R™. STARS to Quality providers have more experience with environmental assessments and ECERS-R™ than public school programs.

While this tool was new to more than half of the STARS Preschool Programs, the vast majority, eighty-four percent (84%) found the ECERS-R™ assessment data to be beneficial and used the data to make classroom improvement goals.[34] Over half of the programs were comfortable sharing the ECERS-R™ information with families and other stakeholders.

Figure 19: Baseline to Spring Assessments Trend

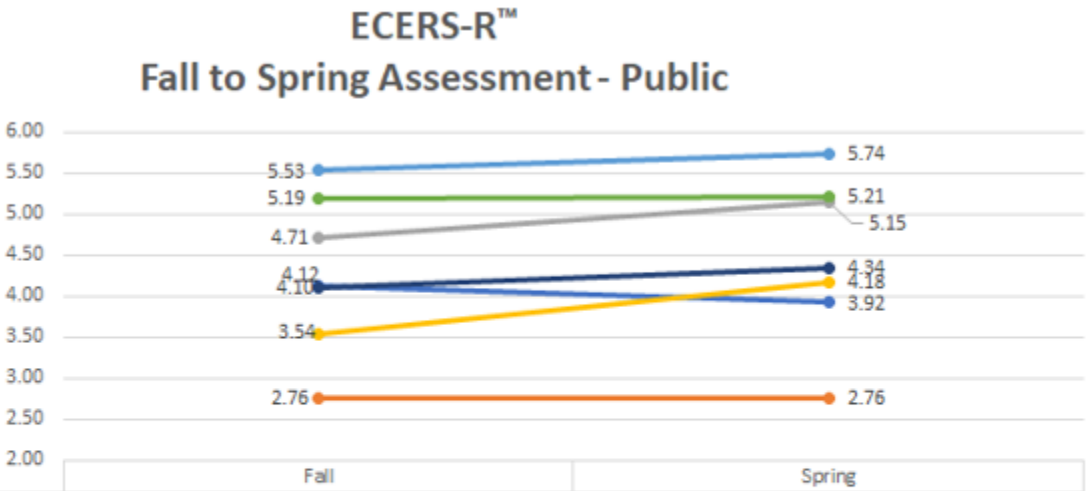


While the overall trend displayed in Figure 19 is important to understand growth over time, ideally, programs will experience movement in all subscales as they work to provide a developmentally appropriate, high-quality preschool classroom. For public programs, the largest improvement was in Activities, which includes

[34] Data collected from Fall 2017 and Spring 2018 ECERS-R assessments.

items such as fine motor skills, art, music and movement, blocks, sand/water, dramatic play, nature/science, math/numbers, use of electronics, and promoting acceptance of diversity.[35]

Figure 20: Fall and Spring Subscale Scores for Public School Classrooms

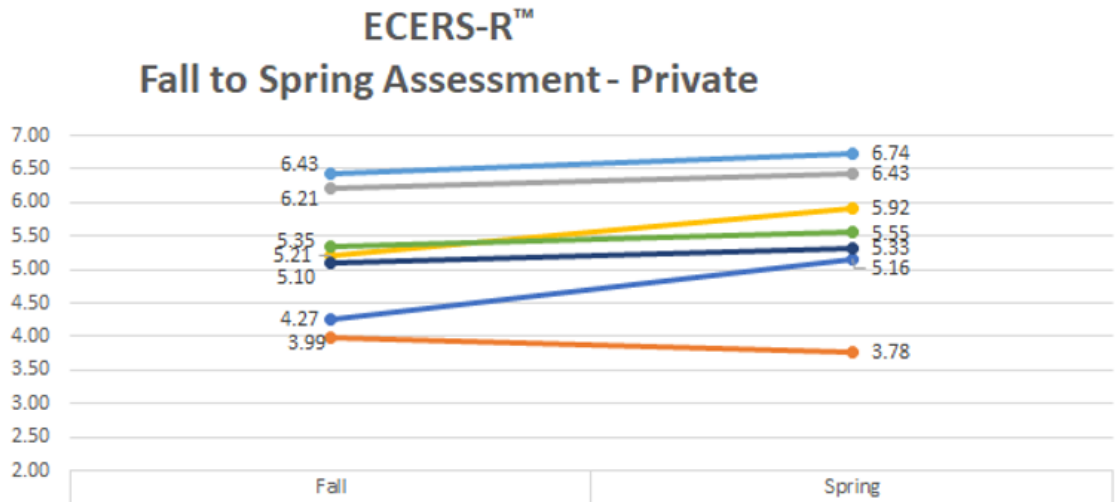


	Fall	Spring
Space and Furnishings	4.12	3.92
Personal Care Routines	2.76	2.76
Language-Reasoning	4.71	5.15
Activities	3.54	4.18
Interaction	5.53	5.74
Program Structure	5.19	5.21
Observation Score	4.10	4.34

[35] Ibid

Private preschool programs saw the largest improvement in Space and Furnishings. The Space and Furnishing subscale includes indoor space arrangements, furnishings, space for privacy, child-related displays, space for large motor skills and equipment. Figure 21 below shows the Fall and Spring subscale scores for private programs.

Figure 21: Fall and Spring Subscale Scores for Private Programs



	Fall	Spring
Space and Furnishings	4.27	5.16
Personal Care Routines	3.99	3.78
Language-Reasoning	6.21	6.43
Activities	5.21	5.92
Interaction	6.43	6.74
Program Structure	5.35	5.55
Observation Score	5.10	5.33

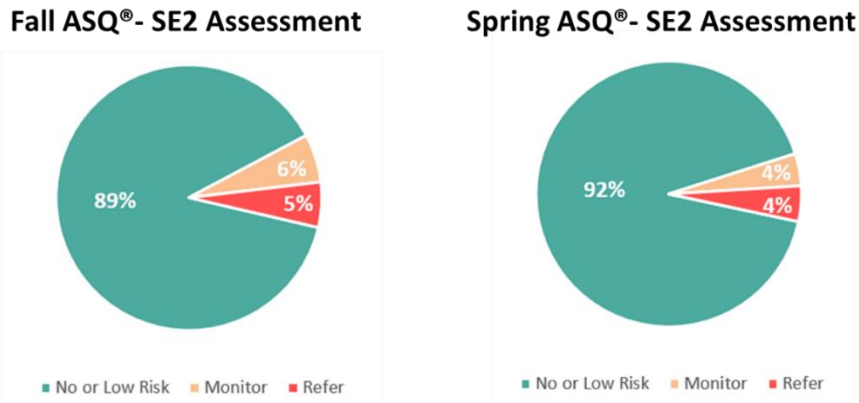
Beartooth Children's Center

Beartooth Children's Center

School Readiness

The primary tools to assess child progress and development for STARS Preschool are the DIAL-4™[36] and ASQ®:SE-2[37], but each tool is used in very different ways. The DIAL-4™ is administered by the classroom teacher and includes evaluations in the fall and spring. The ASQ®:SE-2 consists of components completed by both the classroom teacher and parents. The ASQ®:SE-2 is primarily used to inform teaching staff so they can provide greater social and emotional supports to the child and/or provide referrals for further assessment and support.

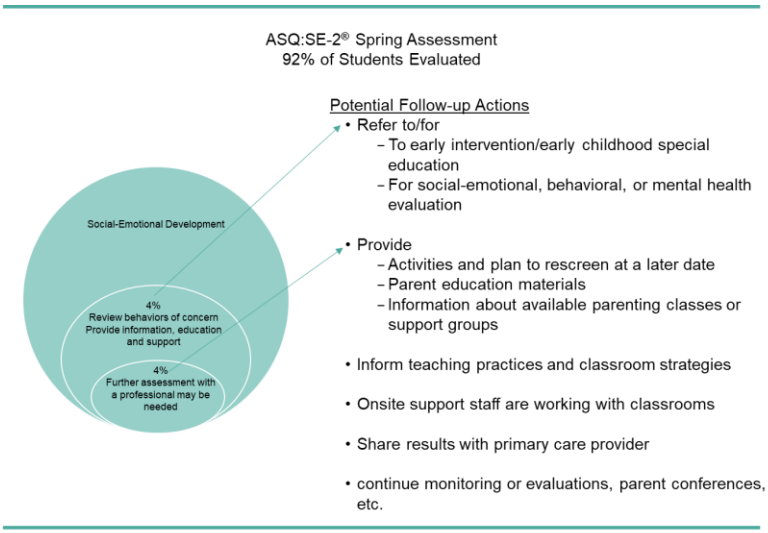
Figure 22: The ASQ®:SE-2 Fall to Spring Comparison



[36] NCS Pearson, Inc. (2018). *Developmental Indicators for the Assessment of Learning™—Fourth Edition (DIAL-4™)*. https://www.pearsonclinical.ca/en/products/product-master/item-76.html
[37] Paul H. Brookes Publishing Co., Inc. (2018). ASQ®:SE-2. https://www.brookespublishing.com/product/asqse-2/

Figure 23 shows the results of the spring ASQ®:SE-2. The results drill down into what might be done for children identified as having potential concerns.

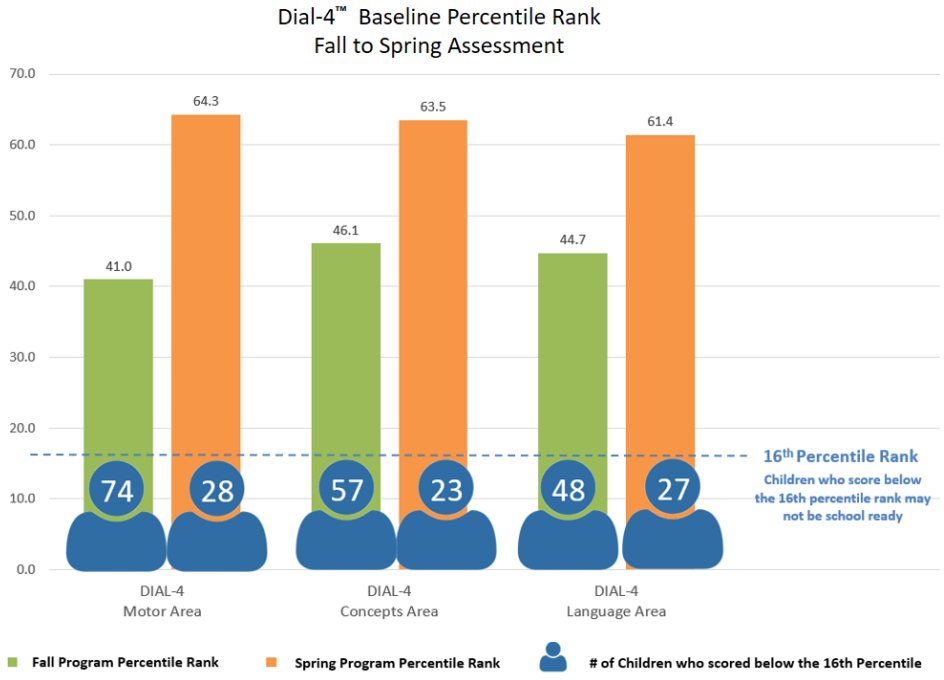
Figure 23: Spring ASQ®:SE-2



For purposes of the year one evaluation, the DIAL-4™ data is the assessment that evaluates gains in school readiness.

Overall, there were significant gains in school readiness for children participating in the STARS Preschool Pilot during year one.

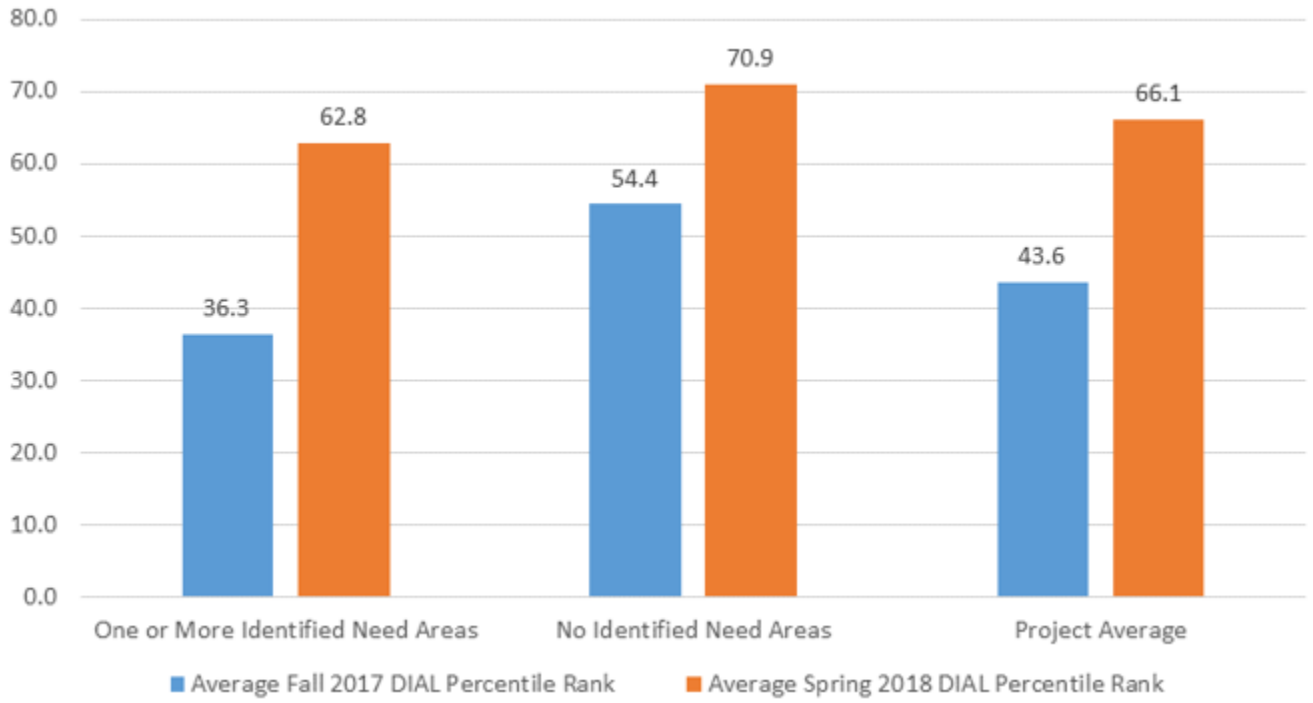
Figure 23a: School Readiness



High Needs

Sixty one percent (61%) of children were identified as having one or more defined high need. Year one data shows that children identified as high-needs in one or more area saw greater (average) growth in DIAL-4™ percentile rank from fall to spring. Despite the higher growth rate for children identified as high-needs, children that were not identified as high-needs retained a higher average DIAL-4™ percentile rank on the spring DIAL-4™ assessment.

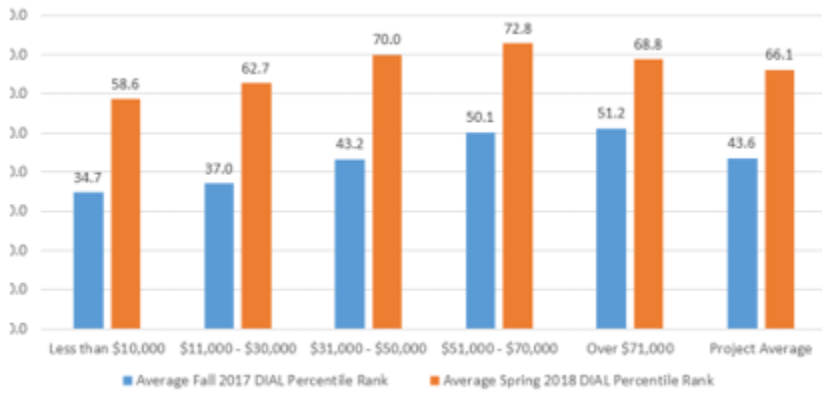
Figure 24: DIAL-4™ Gains – High Needs Identified



Income

The average change from fall to spring DIAL-4™ Percentile Rank is comparable across all family income categories except families with an income over $71,000. Children from families with an income over $71,000 began the year with the highest average DIAL-4™ Percentile Rank. In the spring, they were no longer the group with the highest average score, their score in the spring was slightly lower than, but comparable to, children from families in the $11,000 - $70,000 range.

Figure 25: DIAL-4™ Gains - Income

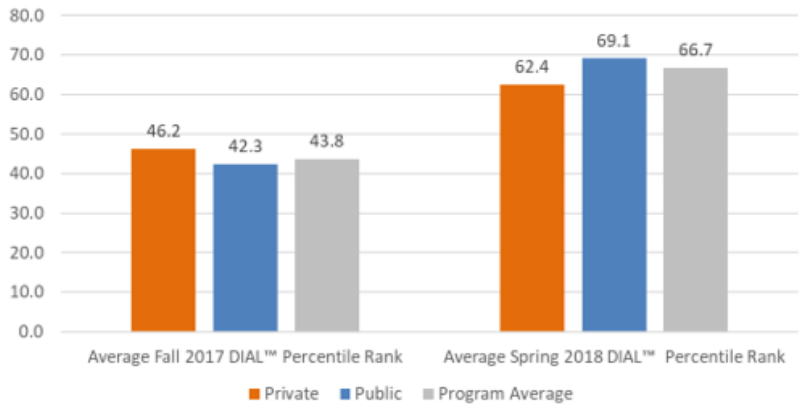


Program Type

In year one, there was not an even distribution of children across public and non-public environments. In the Fall, the average percentile rank for private environments was slightly higher than the average percentile rank for public environments. There are several factors that may contribute to this initial difference. One possible factor is that private environments are more likely to provide services to the same children in the three-year-old and four-year-old years, while public environments are more likely to be providing services for the first time during the four-year-old year.

In Spring 2018, public school classrooms had slightly higher average percentile ranks with the average percentile rank for public classrooms at 69.1 and the average percentile rank for private classrooms at 62.4. Similar to the environmental assessment appearing as a strength for private programs, one possible explanation for this discrepancy could be exposure. For many private programs, this was their first exposure to a normed test for assessment, while public schools frequently use such assessments.

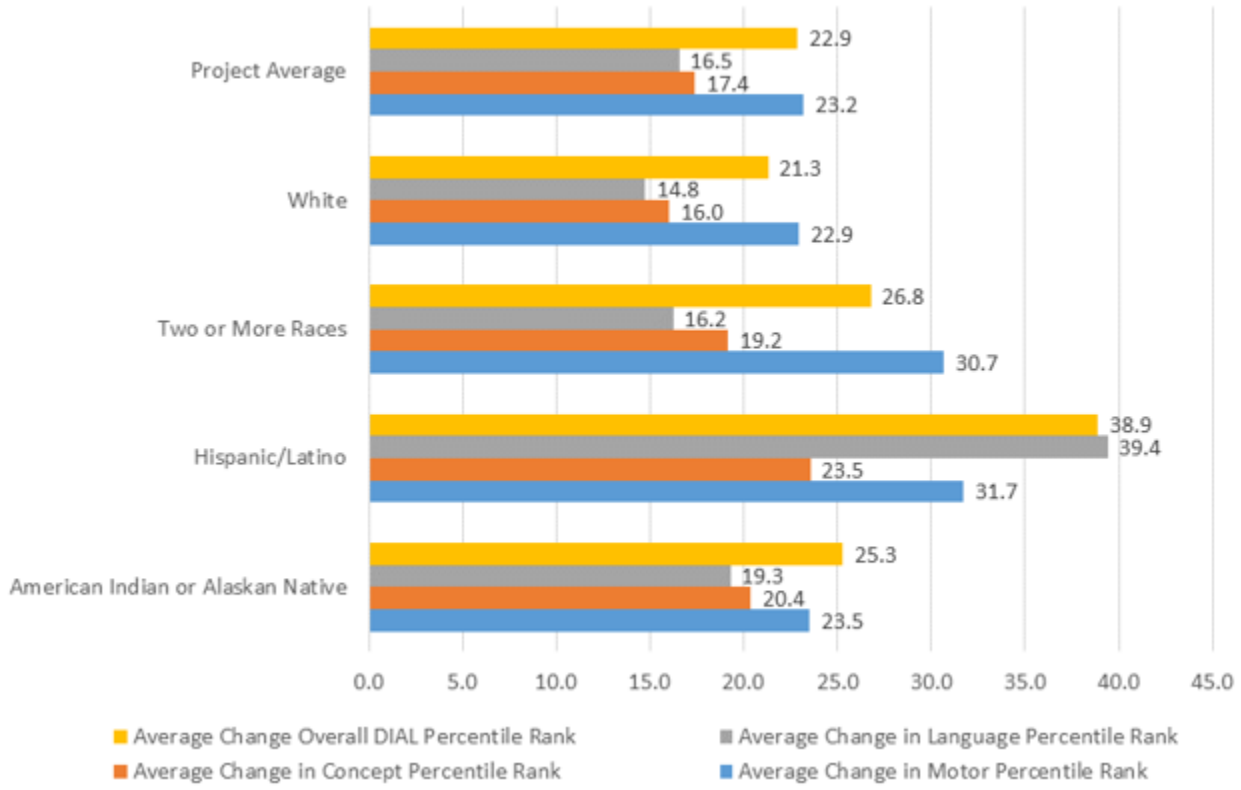
Figure 26: DIAL-4™ Gains – Program Type



Ethnicity

Four ethnic groups had enough students to report data. These include: American Indian or Alaskan Native, Hispanic/Latino, Two or More Races, and White. Three of these groups had similar change in overall DIAL-4™ Percentile Rank from fall to spring: American Indian or Alaskan Native, Two or More Races, and White. The fourth group, Hispanic/Latino, had a larger increase in DIAL-4™ Percentile Rank from fall to spring. This difference was most significant in the Language area. Without a valid English Language Learner assessment for the preschool age range, we are unable to make strong conclusions about this data.

Figure 27: DIAL-4™ Gains - Ethnicity

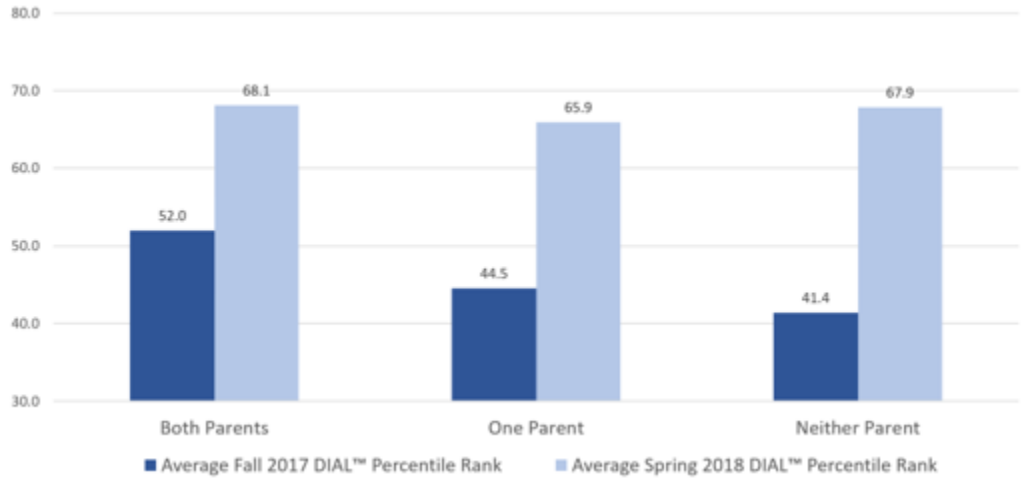


**The total number of children tested does not equal sum of ethnicity groups due to two factors: 1) some ethnic groups had small numbers of children and have been excluded to protect child privacy, and 2) some families chose not to report ethnicity data.*

Parent Education

Overall, we see that children who come from homes where both parents have completed a two-year degree or higher had higher average DIAL-4™ Percentile Ranks in the fall. By spring, their peers had closed the gap and had comparable average DIAL-4™ Percentile Ranks. In addition to the trend in DIAL-4™ overall percentile rank, we see the same trend across all three individual sections of the DIAL-4™ assessment (Motor, Concept, and Language).

Figure 28: DIAL-4™ Gains Parent Education of a Minimum Two-Year College Degree

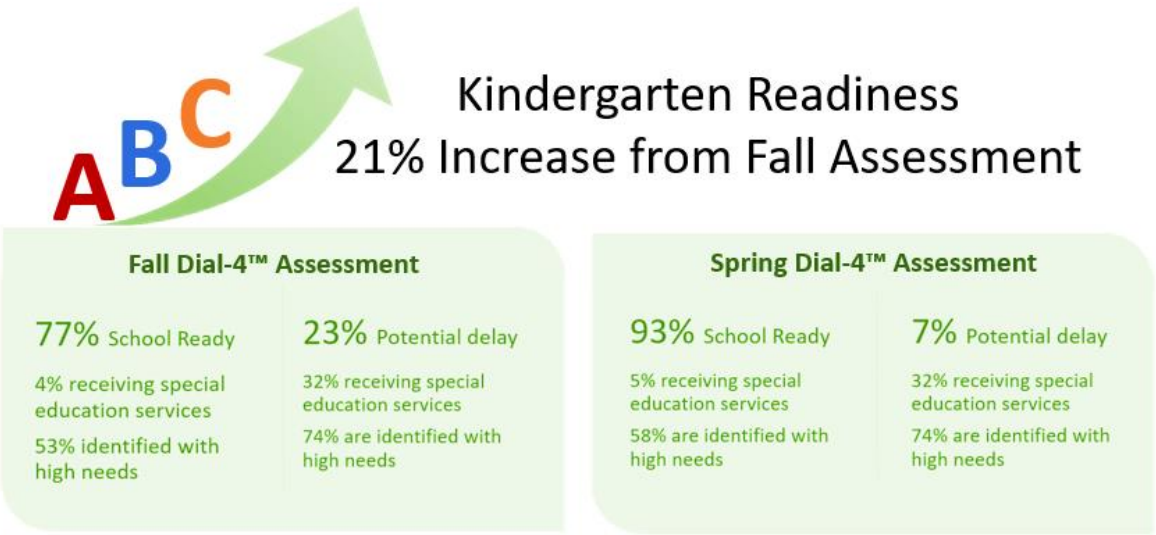


Section 5: Summary of Findings

Twenty one percent (21%) increase in the number of children who were school ready

In the first year of STARS Preschool, there was a twenty-one percent (21%) gain in the number of children who were school ready, from Fall to Spring. The data from year one also suggests that children who came from households that had higher income and higher education levels, generally performed well on the DIAL-4™ in both the Fall and the Spring. Children who came from households with lesser income and education levels generally scored lower in the Fall, but caught up to their peers at the end of the year.

Figure 29: Kindergarten Readiness Increase

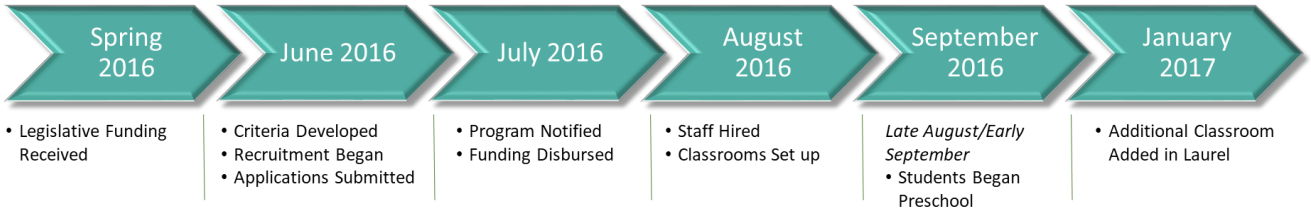


While there were differences among certain demographics and among program types, year one data suggests that high-quality preschool, through the STARS Preschool Program, increases the likelihood that children are ready for kindergarten. Year one data demonstrates that no program type had collective impact on children's readiness more than another. In some cases, private programs performed better than public, and in other cases, public programs performed better than private programs. The data provides a compelling argument to assure that in addition to a mixed delivery model, classrooms should include children from a variety of demographics. This is important for evaluation comparisons, but also critical as we look to help children gain proficiency, by learning alongside their peers, in both academic developmental domains, and social emotional domains.

Section 6: Opportunities for Continued Focus

Pilot projects provide an opportunity to evaluate, consider, and make adjustments to the program based on data and anecdotal feedback. Considerations for criteria, assessment, onsite support and administrative implementation are below. Overall, the STARS Preschool Pilot was successful in its first year, especially considering the short period of time between the legislative directive and meeting children at the door on day one.

Figure 30: STARS Preschool Pilot Timeline



In some cases, enrollment was limited in year one, because private programs already had established enrollment. In contrast, many public programs needed to establish classrooms, hire and train teachers, and were only advertising preschool services late in the summer.

Even with challenges, the STARS Preschool Pilot appears to be successful at the state program level, the individual program level, the community level, the family level, and most importantly, at the child level.

Meeting Program Criteria

Despite the challenge of developing criteria and accountability for multiple types of facilities, there were few issues in implementation for year one of the STARS Preschool Pilot. However, the pilot model and a strong feedback loop between DPHHS and the grantees helped to identify "lessons learned." One of the biggest lessons learned was that a school year calendar leaves limited timespan to fully implement program and environment changes while also providing preschool services.

During the application period and throughout year one, grantees provided feedback related to program criteria challenges.

- The five percent (*5%) administrative cap* was a challenge for Head Start programs. As part of their federal grant requirements, Head Start programs have an administrative cap of fifteen percent (15%). STARS Preschool required a 5% cap but allowed programs to include administrative dollars above 5% to be included as part of their in-kind match. Many Head Start programs operate at 15% or very close to 15%, and these programs found the 5% cap to be a barrier. Several Head Starts said they were not able to overcome this barrier and they did not apply.

- The *length of day* was challenging for some programs and parents. The recommendations were varied, some seeking longer days, some seeking shorter days, but almost all programs sought flexibility. In

rural communities, parents traveling a great distance to the program location, expressed that five, and even four days a week, was too many. During the application process, programs in rural areas provided feedback that the requirement of 28 hours of preschool per week was a barrier to applying for the funding.

- *Outdoor environments*. Playgrounds were reviewed as part of the Health and Safety checklist. This was a challenge in many public school programs. School playgrounds have equipment that is designed for older children and may not have the fencing that is recommended for preschool-age children. As part of the STARS Preschool Pilot, additional funds were provided to support efforts to make outdoor environments more developmentally appropriate. Private programs already adhere to the outdoor standards, as part of being a licensed facility designed for smaller children. As more school districts offer preschool services, this is an area to consider when building new or redesigning playgrounds. Additional start-up dollars for this purpose may need to be a consideration for future.

- *Health and Safety Checks*. Because Health and Safety standards are not required of preschools in Montana, a Health and Safety Checklist was developed to ensure developmentally appropriate and safe environments for all students participating in the STARS Preschool Pilot. Information obtained from the health and safety inspection process during the pilot should inform future recommendations for health and safety standards for preschool programs. The standards were developed by the Quality Assurance Division within the Department of Public Health and Human Services to address key indicators of safety. Due to the timeframes of an academic calendar year, coupled with implementation of the pilot, there were complications in meeting the expectations of periodic assessments throughout the year. Geography, lack of available assessors and the time it took to complete the first round of health and safety inspections made this a challenge that was addressed by reducing the number of inspections. Even though there were challenges, grantees made great progress to address and support improvement for any concerns that were found on the first round of inspections. Programs submitted formal plans of correction for any deficiencies and the state approved corrective action plans, providing support and monitoring to make sure the plans were completed.

  If Montana determines the need for formal health and safety standards for preschool, infrastructure will need to be identified to support ongoing inspections and follow-up.

- *Environment Rating Scale*. The largest lesson learned related to the environmental assessment was that programs need more time to implement changes from baseline data. An academic school year is too short. Based on assessment costs and the time it takes to make improvements, the project may consider assessing only once during the program year, while continuing to provide support for a program to improve over the year. ECERS-R™ [38] was the version used for the Environment Rating Scale Assessments. A newer version has since been released, providing a broader assessment landscape for multi-delivery models. ECERS-3™ [39], the newest version of the tool, will be piloted in several

[38] FPG Child Development Institute. (2018). *Environment Rating Scales*. ers.fpg.unc.edu/node/324

[39] FPG Child Development Institute. (2018). *Early Childhood Environment Rating Scale, Third Edition (ECERS-3)*. https://fpg.unc.edu/node/7426

programs in year two. We will compare the results from both tools and evaluate the differences in partnership with programs at the end of year two.

- *Child Assessments*. Administration of the DIAL-4™ [40] was conducted by teaching staff. This is a different approach from that of the Montana Preschool Development Grant, which utilizes outside assessors. The state should carefully consider the pros and cons of the two data collection approaches. Based on anecdotal feedback below are some factors to consider:
    - Program staff stated consistently that the DIAL-4™ [41] took a long time to administer, but teachers gained a deep understanding of children's entrance skills and were aware of how much they learned during the year. Further, teaching staff said they were more aware of what children needed to know and understand during the year.
    - The cost to administer with reliable, outside assessors is higher.
    - Reliability of the assessment data may be skewed if not implemented consistently and with fidelity to the assessment tool. It is more likely that internal staff are more forgiving with their own children and it is much harder to control for all conditions which might skew data.
    - While the ASQ®:SE-2[42] was envisioned to serve not only as a referral and social emotional support tool, but also a child assessment tool for the purposes of this project, there were challenges in using the data for both purposes. This tool was completed in fall and spring. In year two, there will be increased emphasis on use of the ASQ®:SE-2[43], including monitoring interventions and outcomes as a result of the data collected. Further training may be needed to increase teaching staff understanding of referrals to specialized and community based services. In addition, the ASQ®:SE-2[44] is a family engagement tool and should be used to partner with families to plan next steps. If used in this way, ASQ®:SE-2[45] will be more successful.

Family Engagement

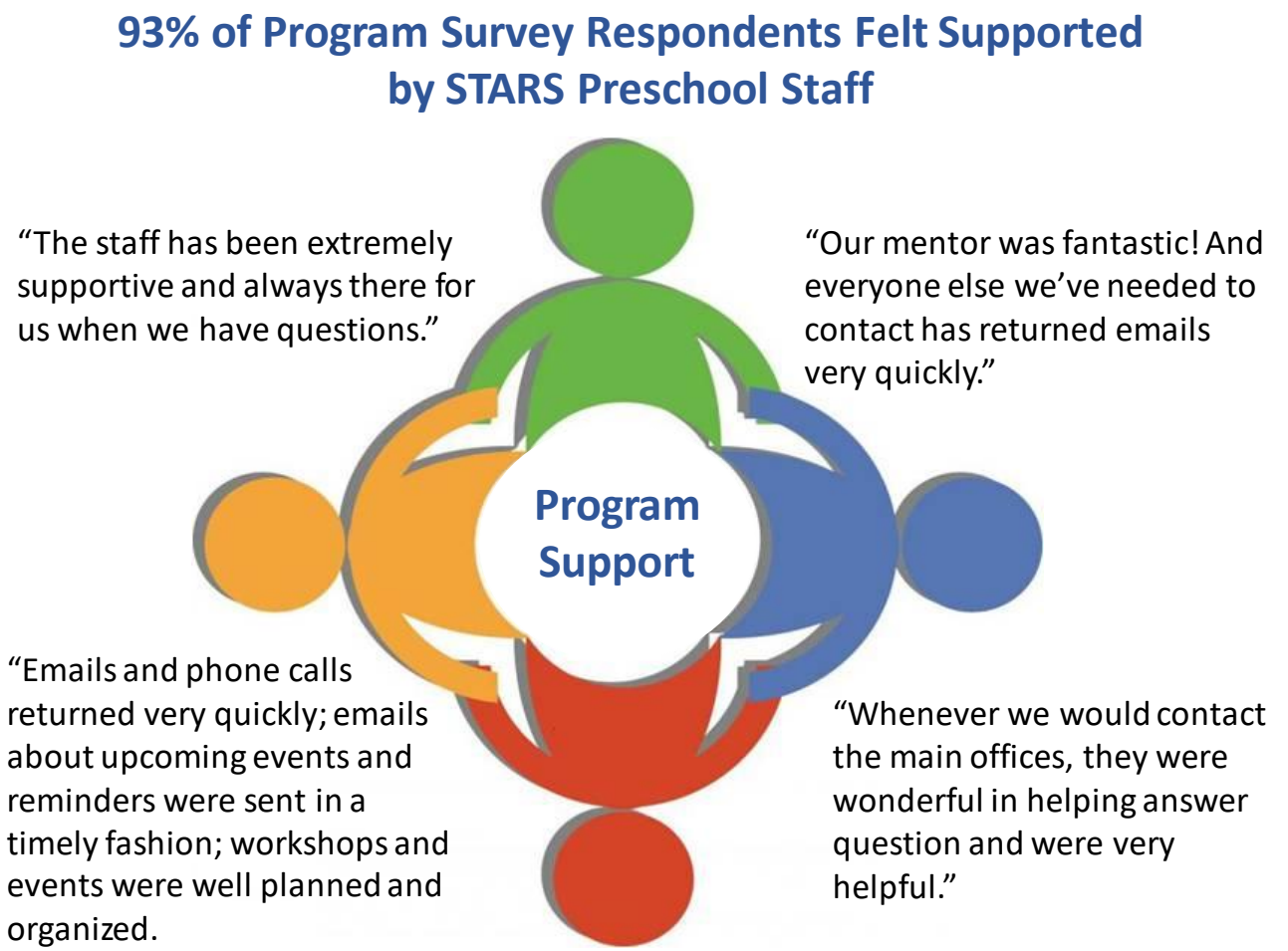
Based on survey data and anecdotal feedback about family engagement and partnership, there is an opportunity to provide further education and support for teaching staff to develop effective strategies to build relationships with families. This will be a focus for year two, and then we can compare survey data from both years.

[40] NCS Pearson, Inc. (2018). Developmental Indicators for the Assessment of Learning™—Fourth Edition (DIAL-4™). https://www.pearsonclinical.ca/en/products/product-master/item-76.html
[41] Ibid
[42] Paul H. Brookes Publishing Co., Inc. (2018). ASQ®:SE-2. https://www.brookespublishing.com/product/asqse-2/
[43] Ibid
[44] Ibid
[45] Ibid

Program Support Considerations

Programs reported that onsite support was extremely valuable for teaching staff and administration. Ongoing evaluation is needed to determine the types of onsite support needed, effectiveness and dosage or frequency of onsite support.

Figure 31: Survey Respondents Quotes on Support



Data and evaluation

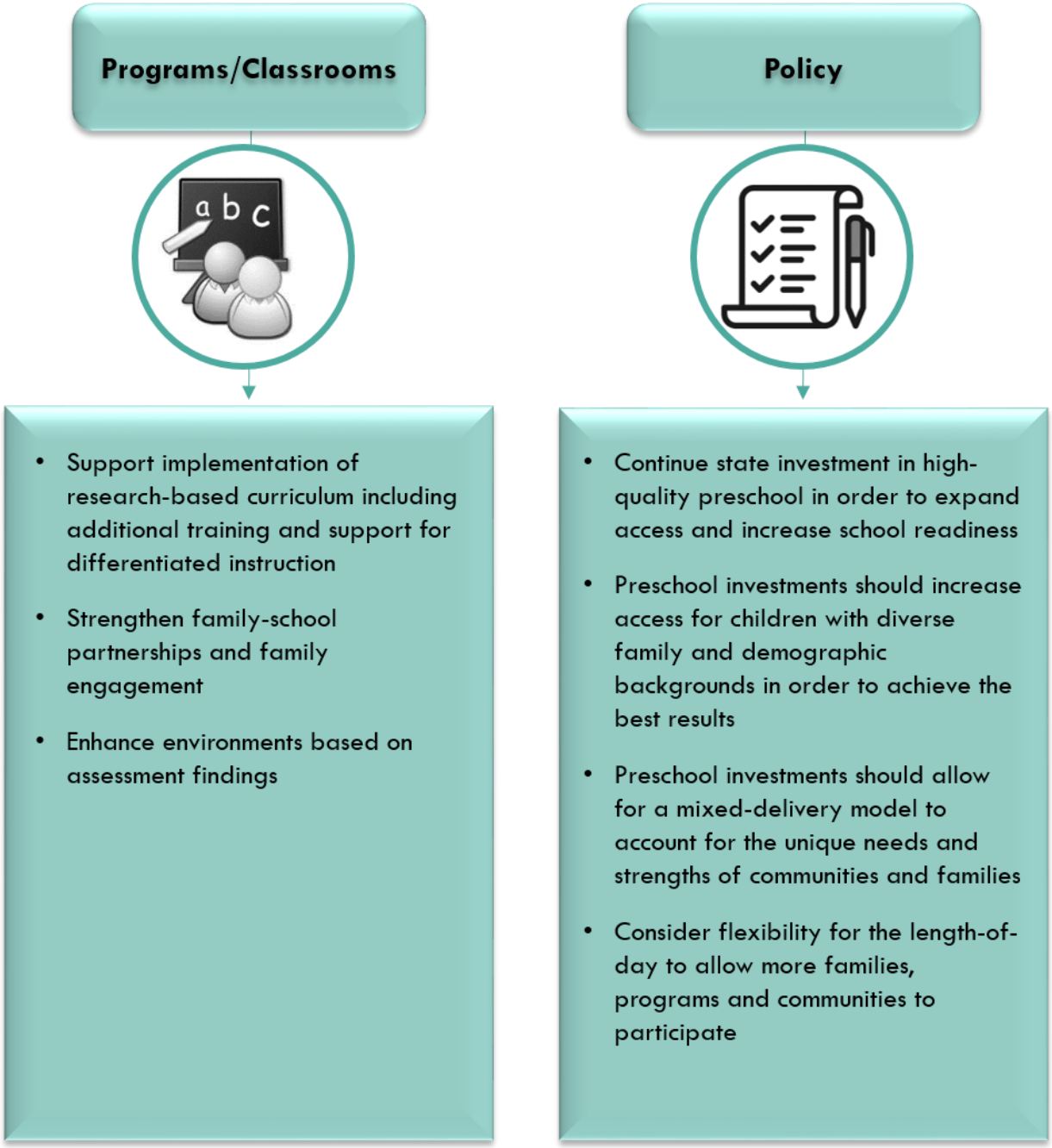
Dedicating adequate staffing and system resources is necessary to ensure efficient and consistent budget and expense tracking, program implementation, data collection, and evaluation. Although implementation of the STARS Preschool Pilot happened quickly, the criteria included relatively robust data collection expectations from each grantee and the program. There are other tracking and evaluation components that would be valuable to track the impact of state preschool investments, including longitudinal data connections between preschool and K-12 data elements collected by the Office of Public Instruction.

Ongoing feedback and flexibility for grantees was critically important to the success of the STARS Preschool Pilot. As the pilot received feedback, adjustments were made to adapt to specific needs of programs and to improve communication and implantation of supports from the state.

Section 7: Recommendations and Considerations for future

Recommendations are separated into four main categories: Programs/Classrooms, Policy, Administrative, and Data.

Figure 32: Recommendations



Data

- Implement longitudinal data systems to effectively measure and analyze the impact of preschool over time
- Implement a formal evaluation of STARS Preschool with a control group

Administration

- Continue to build on existing infrastructure and systems, assuring alignment with nationally-recognized tools and best practices
- Consider preschool licensure or health and safety standards for preschool

Marion School District

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List of Figures

Figure 1: Montana Map of STARS Preschool Programs 6
Figure 2: Programs that were selected 7
Figure 3: ECERS-R™ Subscales (Montana) 11
Figure 4: Year One Classroom Distribution by Community Size 16
Figure 5: STARS Preschool Enrollment at the End of Year One 20
Figure 6: Year One Student Enrollment by Program Type 21
Figure 7: Teacher-Student Ratio 21
Figure 8: Classroom Hours per Week 22
Figure 9: Curriculum 24
Figure 10: Survey Respondents Quotes on Engagement 25
Figure 11: Number of Teachers by Qualification Category 26
Figure 12: Median Wage in Montana vs. STARS Preschool Pilot Average Wage 27
Figure 13: Initial Budget by Program Type Year One 28
Figure 14: Year One Actual Expenditures by Program Type 28
Figure 15 Expenditures by Category 29
Figure 16: Spending Per Child Enrolled 29
Figure 17: Spending Per Child by Program Type 30
Figure 18: STARS Preschool Student Demographics 32
Figure 19: Baseline to Spring Assessments Trend 33
Figure 20: Fall and Spring Subscale Scores for Public School Classrooms 34
Figure 21: Fall and Spring Subscale Scores for Private Programs 35
Figure 22: The ASQ®:SE-2 Fall to Spring Comparison 36
Figure 23: Spring ASQ®:SE-2 37
Figure 24: DIAL-4™ Gains – High Needs Identified 38
Figure 25: DIAL-4™ Gains - Income 39
Figure 26: DIAL-4™ Gains – Program Type 40
Figure 27: DIAL-4™ Gains - Ethnicity 41
Figure 28: DIAL-4™ Gains Parent Education of a Minimum Two-Year College Degree 42
Figure 29: Kindergarten Readiness Increase 43
Figure 30: STARS Preschool Pilot Timeline 44
Figure 31: Survey Respondents Quotes on Support 47
Figure 32: Recommendations 48