COMMONWEALTH of VIRGINIA

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November 2, 2018

The Honorable S. Chris Jones, Chairman
House of Delegates Appropriations Committee
Pocahontas Building
900 East Main Street, 13th floor
Richmond, VA 23219

The Honorable Thomas K. Norment, Jr., Co-Chair
The Honorable Emmett W. Hanger, Jr., Co-Chair
Senate of Virginia Finance Committee
Pocahontas Building
900 East Main Street, 14th floor
Richmond, VA 23219

Dear Sirs:

I am pleased to submit the Department of Education's plan to ensure high quality instruction in all Virginia Preschool Initiative preschool classrooms pursuant to Item 136.C.14.j of the 2018 Appropriation Act. The Act requires the Department of Education to send this report to the Chairmen of House Appropriations and Senate Finance Committees.

If you have questions or require additional information relative to this transmittal, please do not hesitate to contact Jenna Conway, Chief School Readiness Officer, at jenna.conway@governor.virginia.gov.

Sincerely,

James F. Lane

JFL/mmc

Attachment

A PLAN TO ENSURE HIGH-QUALITY INSTRUCTION IN ALL VIRGINIA PRESCHOOL INITIATIVE CLASSROOMS

VIRGINIA DEPARTMENT OF EDUCATION

SUBMITTED TO THE JOINT SUBCOMMITTEE ON THE VIRGINIA PRESCHOOL INITIATIVE

NOVEMBER 1, 2018

Authors:
Virginia Department of Education

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Executive Summary

All Virginia children, regardless of background or zip code, are capable of and deserve to enter kindergarten ready. Yet the most recent data from the Virginia Kindergarten Readiness Program indicates that 40% of students enter kindergarten "not ready" in terms of demonstrating key school readiness skills. For children from economically disadvantaged backgrounds that percentage climbs to 48% - far behind their more advantaged peers. Unaddressed, not being ready for kindergarten has long-term consequences – falling below grade level expectations, grade retention, special education placement and school drop-out. Virginia can and should do better.

An investment in the early years of life is one of the best investments society can make. This return is life-long—children who experience effective early childhood programs are more likely to finish college, get high-paying jobs, and be healthier and happier later in life. Yet access does not equal quality and quality does not happen by chance. If the quality of early childhood education experiences is not high there will be little or no return on investment.

In response to the 2018 General Assembly, the VDOE created this plan to help ensure that the Virginia Preschool Initiative, which serves nearly 18,000 at-risk children across 1,300 classrooms, provides a high-quality preschool experience that helps prepare each 4-year-old served for kindergarten. The plan aggregates lessons learned from the JLARC study, Virginia Preschool Initiative Plus implementation, and University of Virginia – Center for Advanced Study of Teaching and Learning (CASTL). As requested by the General Assembly, the plan covers the areas of Curriculum, Teacher-Child Interactions, and Professional Development. Here follows a summary:

Integrated, Evidence-Based Curriculum		
Desired Outcomes	**Action Steps**	**Success Measures**
• All VPI teachers will be supported to use a vetted, evidence-based curriculum in their classrooms. • All VPI teachers will implement their chosen curriculum with fidelity to promote children's learning and development. • All VPI teachers will use assessments to individualize their instruction to meet the needs of their students.	1. Adopt a short list of curricula that VPI programs must choose from or request a review of an alternative option 2. Create checklist to clarify expectations for curriculum implementation, including use of ongoing assessment in addition to PALS Pre-K. 3. Observe curriculum implementation and gather data. 4. Use corrective action where curriculum is not being implemented effectively.	• % of VPI Classrooms using approved curriculum • % of VPI Classrooms monitored that are implementing with fidelity, including use of ongoing assessment • % of VPI Classrooms that are in corrective action, and how many are able to move out of corrective action within expected timeline
Assessing Teacher-Child Interaction Quality		
Desired Outcomes	**Action Steps**	**Success Measures**
• All VPI teachers will be observed at least two times a year with the Classroom Assessment Scoring System (*CLASS*®), a valid and reliable observation tool that measures the quality of teacher-child interactions, by local observers who will also provide targeted feedback and professional development for ongoing quality improvement purposes.	1. Require all VPI classrooms be observed twice annually using the CLASS® tool by local observers in addition to external (CASTL) observations. 2. Compare local and external observation results in order to ensure accuracy and drive improvement. 3. Create a Virginia Observation Protocol Guide. 4. Set initial thresholds based on what is needed to ensure impact on children	• % of VPI Classrooms observed using CLASS at least two times a year • #/% of Site Leaders trained to CLASS reliability • Overall average CLASS scores at site, division and state levels • CLASS scores by domain at site, division and state levels

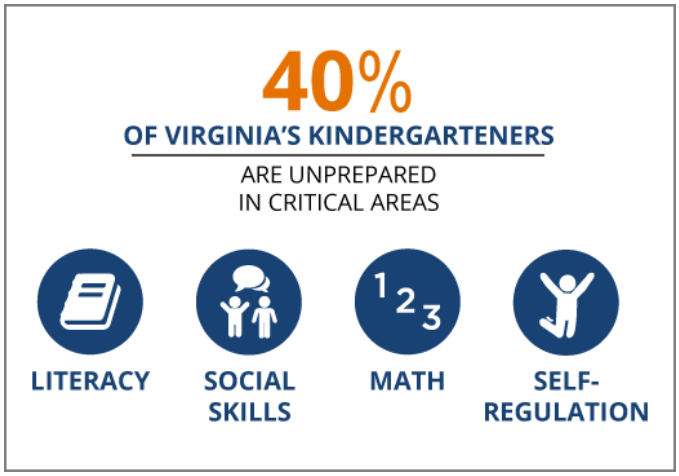
• All VPI teachers will be also observed at least every two years with the *CLASS*® by external observers to provide a statewide baseline and measure the accuracy of observers on ongoing basis. • All classroom observation data will be aggregated to the levels of center, program, and division to gauge both the quality of local observers and interactions across the state.	but revisit when there is more data on Virginia classrooms. 5. Connect VPI quality improvement efforts to the broader early childhood system in Virginia.	• Growth in CLASS scores – overall and by domain at site, division and state levels • % of VPI Classrooms that meet threshold in each of the three domains
Providing Individualized Professional Development		
Desired Outcomes	**Action Steps**	**Success Measures**
• All VPI teachers will receive high-quality professional development that supports their knowledge, skills, and practice to facilitate effective teacher-child interactions and instruction that promotes children's learning and development towards kindergarten readiness. • All professional development will: o Be individualized based on the classroom data (e.g. CLASS scores or children's assessment data) o Focus on standards, curriculum and/or improving teacher-child interactions; and o Be delivered with fidelity with the necessary leadership and the organizational support.	1. Ensure access to individualized classroom data. 2. Produce a Professional Development Guide and require Divisions to ensure teachers receive individualized feedback and professional development plans. 3. Establish a statewide staffing and a Technical Assistance Network with CASTL. 4. Support all VPI teachers to be trained on VKRP (in addition to kindergarten teachers) so that they understand how kindergarten readiness is measured and can promote children's learning and development towards kindergarten readiness. 5. Invest in development of and training on a comprehensive data system that enables stakeholders to examine key data for informing investment decisions.	• Growth in CLASS scores and/or use of curriculum that correlates with participation in professional development • % of Professional Development plans sampled that meet all state criteria • % of Teachers satisfied with professional development (e.g., training, coaching)

The plan also provides analysis on VPI funding and the additional financial investment needed, noting that most activities have been included in the budget or existing funding for VPI-related purposes may be repurposed to support the actions called for in 2019-2020. This includes approximately $2 million currently budgeted for incentives for provisionally-licensed VPI teachers that would likely go unused. In the final section, the plan provides an overview of how the VDOE will approach implementation.

This plan can also serve as a model for strengthening early childhood across other care and education settings. More than 100,000 Virginia children from birth-to-five participate in publicly-subsidized programs annually including child care assistance, Early Head Start, Head Start, Early Childhood Special Education and school-based pre-K including the Virginia Preschool Initiative (VPI). To improve kindergarten readiness in Virginia, all of these children need access to high-quality classroom interactions and instruction. This plan does not address the implementation steps nor funding needed, but it does suggest an approach that could be applied across settings. Moreover, this plan does align with existing efforts including Head Start and Virginia Quality which are supporting classrooms to use curriculum, strengthen teacher-child interactions and instruction and use individualized data to drive continuous quality improvement. It should be noted that with additional federal resources it may be possible to implement these action steps in more of these classrooms without expending additional state resources.

1. Introduction: Improving School Readiness

All Virginia children, regardless of background or zip code, are capable of and deserve to enter kindergarten ready. Yet the most recent data from the Virginia Kindergarten Readiness Program (VKRP) indicates that 40% of students enter kindergarten "not ready" in terms of demonstrating key school readiness skills. For children coming from economically disadvantaged backgrounds that percentage climbs to 48% - almost half of these children enter kindergarten far behind their more advantaged peers.



SOURCE: VKRP and PALS 2017 results from kindergarten students in 63 school divisions.

Unaddressed, not being ready for kindergarten has long-term consequences – falling below grade level expectations, grade retention, special education placement and school drop-out (Belfield et al., 2006; Isaacs, 2012, Reynolds et al., 2011).

Virginia can and should do better.

An investment in the early years of life is one of the best investments we can make. Nobel Prize winning Economics Professor James Heckman concluded that high-quality birth-to-five early education experiences provide a 7 to 10% return on investment (Elango, S., García, L.L., Heckman, J.J., & Hojman, A., 2015). This return is life-long—children who experience effective early childhood programs are more likely to finish college, get high-paying jobs, and be healthier and happier later in life.

Yet too few Virginia children experience high-quality early childhood education from birth to age 8.

- 70% of disadvantaged children birth-to-five lack access to an affordable early childhood care and education option.
- 30% of eligible children are served by publicly-funded programs – pre-K, Head Start and Child Care Assistance - but quality varies greatly across the Commonwealth.
- 9% of children in kindergarten in Virginia have an identified disability and require special education and related services; yet the opportunity for these children to go to preschool with typical peers is limited.
- Programs have to navigate different regulations, rating systems and monitoring processes.
- Changing demographics means more vulnerable children each year – from very low income families, with special needs and Dual Language Learners – who are less likely to access a quality program that prepares them for kindergarten. In fact, the number of children in preschool identified with a disability requiring special education and related services has been rising annually.

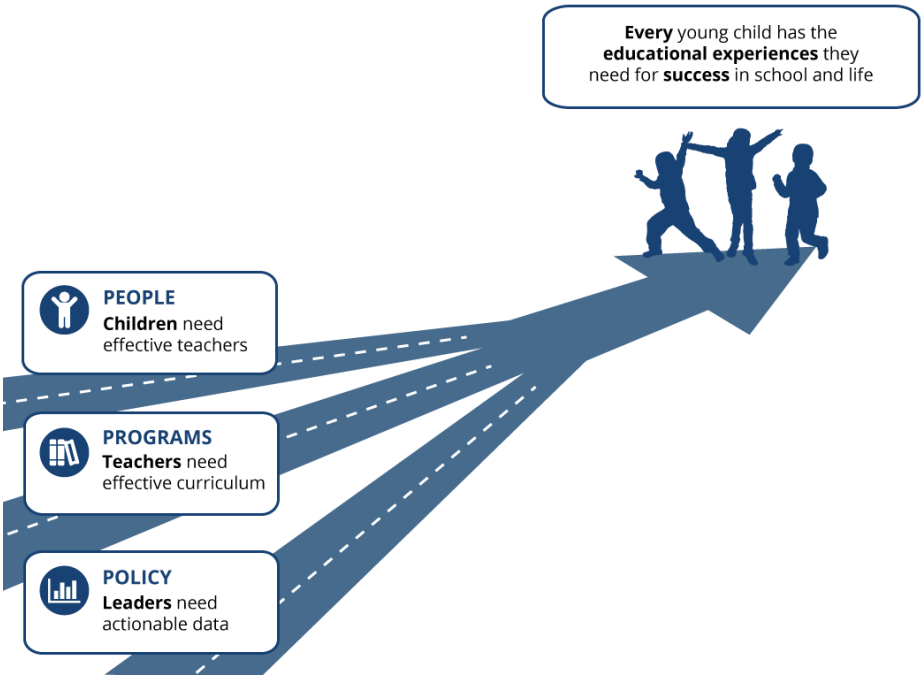
Access does not equal quality, and quality does not happen by chance. If the quality of early childhood education experiences is not high there will be no return on investment.

Classroom interactions between teachers and children matter most. There are multiple definitions and measures of quality, including a range of structural and process aspects such as health and safety, equipment and materials, and routines and schedules. But above all, young children need teachers who:

- Provide emotionally and instructively supportive interactions to students within a well-organized context.
- Set high standards for all children and facilitate intentional interactions to support children's school readiness skills.
- Fully implement a comprehensive curriculum package to support student learning and development through the use of developmentally appropriate and highly engaging learning activities.
- Regularly assess children's engagement and current skill levels to adapt activities to meet the needs of all learners.
- Build relationships with families to support home-school connections.

Nearly 100,000 Virginia children from birth-to-five participate in publicly-subsidized programs including child care assistance, Early Head Start, Head Start, Early Identification, Early Childhood Special Education and school-based pre-K including the Virginia Preschool Initiative (VPI). **To improve kindergarten readiness in Virginia, all of these children need access to high-quality classroom interactions and instruction, regardless of site location or funding type.**

In response to the 2018 General Assembly, this plan focuses on ensuring VPI teachers are highly effective in their interactions and instruction with young children in the classroom. This is an important start. However, to realize a vision that every young child in Virginia has the educational experiences they need for success in school, it is helpful to consider a larger vision of how we support all publicly-funded programs to ensure that teachers are providing children with the interactions needed to support their learning and development.



- **PEOPLE**
  Children need teachers with the knowledge and skills to support their development and learning. Responsive and cognitively stimulating **teacher-child interactions** are critical for children to develop the skills they need to make a successful transition to kindergarten and beyond. Teachers must have access to **professional development** that will enable them to provide the quality of interactions needed to support our youngest learners, including those with special needs or developmental delays.

- **PROGRAMS**
  Teachers need **effective early childhood curricula** that provide stimulating and engaging learning experiences, proven to promote school readiness. Typically, if no formal curricula is being used, then children may participate in activities that are not age-appropriate and spend too much time in routines that do not support their learning. Use of an effective, integrated and comprehensive curriculum package helps ensure children are engaged in developmentally appropriate, child-led and teacher-guided activities that promote their school readiness skills. However, handing teachers a box of curriculum materials is not enough. Teachers need **professional development** that is focused on how to implement their curriculum fully.

- **POLICIES**
  Leaders must enact policies so that communities will ensure that **all** children's early experiences are of the highest quality. To do this, leaders at all levels need **actionable data** about the implementation and impact of early childhood education initiatives. Some of this data already exists in Virginia (e.g., use of curriculum, CLASS scores, VKRP results) but it is not consistently available across all early childhood classrooms, making it more difficult to systematically use this data to improve outcomes.

Source: CASTL 2018 Vision for Early Childhood Education

In 2017, the Joint Legislative Audit and Review Commission (JLARC), released the report *Improving Virginia's Early Childhood Development Programs* that identified and reviewed state-supported early childhood development programs to determine the best strategy for future early childhood investments.

In that report, JLARC noted that the state lacks sufficient data to determine whether VPI is effective at improving the skills children need to be ready for kindergarten. Currently, the only consistent data collected on children's development across state-funded preschool is the Phonological Awareness Literacy Screen Pre-K (PALS Pre-K). In the past 5 years, 24,000-26,000 children have been screened in state-funded preschool programs annually. In addition, PALS Pre-K is used with up to 5,000 children in other early childhood classrooms via private purchase or through separate agreements with UVA. Although this creates a repository of state information on young children's literacy progress, it is not a sufficient, nor comprehensive picture of young children's development nor school readiness.

Furthermore, there are not sufficient assurances of the quality of the VPI program across localities. JLARC made the following recommendations to improve the design and implementation of the VPI. These recommendations fall rather neatly into the areas of PEOPLE — supporting teachers through individualized professional development to ensure effective teacher-child interactions, PROGRAMS — fully implementing an evidence-based curriculum in every classroom, and POLICY — gathering reliable and valid data through CLASS® and VKRP that provide actionable data at the classroom, program, division and state levels.

The JLARC recommendations are summarized in Figure 1-1. The General Assembly supported these recommendations through a series of initiatives (not all initiatives have been allocated the funding required for full implementation of the recommended improvements).

FIGURE 1-1: Summary of JLARC Recommendations
JLARC Recommendations

- R1. Require all school divisions to participate in VKRP.
- R6. Use the results of VKRP to determine how well the Virginia Preschool Initiative (VPI) promotes readiness in all key developmental domains.
- R7. VPI classrooms have the quality of their teacher-child interactions assessed through a rigorous and research-based classroom observational instrument (such as the CLASS® observational instrument) at least once every two years.
- R8. Establish a statewide minimum acceptable threshold for the quality of teacher-child interactions for the VPI.
- R9. Develop a list of approved research-based early learning curricula that align with the state's early learning standards; (ii) update the list at least every three years; and (iii) require providers to select and use curricula from the list of approved curricula as a condition of receiving funding through the VPI.
- R10. VPI teachers to annually receive individualized professional development from professional development specialists to support quality teacher-child interactions and effective curriculum implementation.
- R11. Ensure that high-quality preschool is provided through the VPI. On an ongoing basis, the Virginia Department of Education (VDOE) should (i) monitor the quality of teacher-child interactions; (ii) ensure the use of evidence-based curricula; (iii) facilitate individualized professional development and direct more resources to programs that do not meet expectations for quality; and (iv) report to the General Assembly on the extent to which VPI funding supports high-quality pre-K experiences across the state.
- R12. Develop a plan to ensure high-quality preschool is provided through the VPI. The plan should detail how VDOE will (i) monitor the quality of teacher-child interactions; (ii) ensure the use of evidence-based curricula; (iii) facilitate individualized professional development and direct more resources to programs that do not meet expectations for quality; and (iv) provide the General Assembly with useful information about how the VPI funding supports quality pre-K experiences for children across the state. The plan should include details on the number of staff and additional funding needed to carry out these new responsibilities. VDOE should submit its proposal to the House Appropriations and Senate Finance Committees by November 1, 2018.

In addition to JLARC, Virginia has also benefitted from the federal Preschool Development Grant which enabled the Commonwealth to add a significant number of preschool classrooms with high-quality elements and practices through the Virginia Preschool Initiative+ (VPI+). During the course of the grant, four cohort years totaling over 5,000 at-risk four-year-olds were able to access VPI+ preschool experiences that included:

- Use of vetted, integrated and comprehensive high-quality curriculum
- Measurement and subsequent improvement of teacher-child interactions using the CLASS; and
- Professional development, coaching and technical assistance for leaders and teachers, individualized and aligned to their program and classroom-level data.

Through federal funding, the VDOE contracted with an outside evaluator (SRI International) whose evaluation showed (Gaylor, Chow, Grindal, Golan, Davis-Mercier, Nguyen, Tiruke, Williamson, 2018):

- Children who attended VPI+ in Year 3 made significant gains from fall to spring across all school readiness domains: Literacy, math, approaches to learning, and social and emotional development. Cohort 3 VPI+ children generally made greater fall-to-spring skill gains than VPI+ children in Cohorts 1 and 2, especially in literacy, early math, and social skills and behavior control.
- Using a regression discontinuity design (RDD) study, SRI found that enrollment in VPI+ yielded large, positive impacts on children's literacy skills (effect sizes between 1.0 to 1.12); moderate impacts on the development of children's early mathematics skills and self-regulation (effect sizes

equal to 0.33 and 0.38, respectively); and small impacts on vocabulary skills (effect sizes equal 0.15).

- RDD findings revealed that participation in VPI+ accelerated children's development of important school readiness skills. In the 12 months between enrolling in VPI+ and beginning kindergarten, attending VPI+ led children to develop more than 15 months of mathematics skills and more than 20 months of literacy skills. These impacts are consistent with findings from other analyses of high-quality public preschool programs.
- Kindergarten entry data showed broad positive impacts on literacy math, self-regulation, and oral language skills.

Essentially, participating in VPI+ accelerated children's key kindergarten readiness skills. The VPI+ classrooms included an array of diverse children including children with disabilities and dual language learners who also benefited and demonstrated gains.

Aggregating lessons learned from the JLARC study, VPI+ implementation, and UVA-CASTL recommendations, the VDOE created this plan to help ensure that the VPI, which serves nearly 18,000 at-risk children across 1,300 classrooms, provides a high-quality preschool experience to each 4-year-old served. In turn, more Virginia children will be kindergarten ready, thus putting them on track for success in school and beyond.

As requested by the General Assembly, in the sections that follow, we provide details for implementing quality initiatives in the areas of **Curriculum**, **Teacher-Child Observations**, and **Professional Development**.

In each section, this plan outlines:

- Desired Outcomes
- Current Practice
- Best Practice
- Action Steps
- Funding and Resources Needed

In addition, we have included data on how VPI funding from state, local, and federal sources support local VPI programs and roughly estimated the additional financial investment needed to fully implement these initiatives. It should be noted that this plan articulates a phased-in approach to support local implementation and spread costs over time. It should also be noted that existing funding may be repurposed to support the actions called for as it relates to curriculum and CLASS® in 2019-2020.

In the final section, the plan provides an overview of how the VDOE will approach implementation. To ensure high-quality instruction in all VPI classrooms, the VDOE, with CASTL, will need to thoughtfully implement the action steps and track progress over time. To support an effective implementation, the VDOE will engage in a range of activities to further engage stakeholders, communicate to the field and track successes.

This plan can also serve as a model for strengthening early childhood across other care and education settings. As noted earlier, nearly 100,000 Virginia children from birth-to-five participate in publicly-subsidized programs including child care assistance, Early Head Start, Head Start, Early Intervention, Early Childhood Special Education and school-based pre-K including the VPI. In fact, there are over 19,000 children ages 2-5 receiving Early Childhood Special Education in Virginia's public schools yet only a portion of the four-year-olds identified are participating in the VPI. Children with disabilities may qualify for the VPI and be served in these classrooms. Given the documented need for supports and services at such a young age, the VPI can provide the type of high-quality program needed. Plus, inclusion of children with

disabilities with typical peers leads to improved development including better social-emotional skills and friendships. Children with disabilities should be able to benefit from the quality measures outlined in this plan and investment made for Virginia's children.

To improve kindergarten readiness in Virginia, all publicly-funded children need access to high-quality classroom interactions and instruction, regardless of site location or funding type. This plan does not address the implementation steps nor funding needed but it does suggest an approach that could be applied across settings if Virginia sought to improve quality and increase kindergarten readiness more broadly. Moreover, this plan does align with existing efforts including Head Start and Virginia Quality which are supporting classrooms to use curriculum, strengthen teacher-child interactions and instruction and use individualized data to drive continuous quality improvement. It should be noted that with additional federal resources it may be possible to implement these action steps in more of these classrooms without expending additional state resources.

Lastly, it should be noted that this plan suggests an approach for strengthening instruction in VPI classrooms. Doing so is critically important to ensuring that more Virginia children experience learning and teaching that prepares them for kindergarten, putting them on track for success as they enter school. It is important to note, learning and development is cumulative and strong instruction in pre-K or early childhood special education or child care or Head Start does not guarantee that children will reach third grade on level, thus better prepared for success throughout their school career. Rather, children need strong, aligned and coherent instruction and supports throughout the critical early childhood experiences and early elementary grades in order to fully realize their learning potential and be prepared for future success (Kauerz, 2018). In implementing this plan, the VDOE will work closely with divisions to ensure strong transitions to kindergarten and alignment across the pre-K to third grade spectrum.

2. Ensuring Use of Evidence-Based Curriculum

Desired Outcomes

- All VPI teachers will be supported to use a vetted, evidence-based curriculum in their classrooms.
- All VPI teachers will implement their chosen curriculum with fidelity to promote children's learning and development.
- All VPI teachers will use assessments to individualize their instruction to meet the needs of their students.

Current Practice

- 80% of divisions that have VPI classrooms report using a comprehensive, integrated curriculum that have been vetted and are evidence-based. All VPI+ classrooms are using a vetted and evidence-based curriculum. In a 2017-2018 survey, VPI+ teachers reported having the experience, materials, and professional development support needed to successfully implement curricula (Gaylor, et al., 2018).
- No data exist to know how teachers and leaders are being trained and supported to implement their chosen curriculum package. Similarly, there is no information available to know if the chosen curriculum is being implemented with fidelity.
- VPI classrooms are expected to use a curriculum that provides an assessment but there is little to no data as to how assessment is being used. All VPI teachers do use PALS Pre-K as a literacy screener three times a year.
- In addition to PALS Pre-K, all VPI+ programs are utilizing ongoing assessment, including Teaching Strategies *GOLD,*™ to measure children's skills, individualize instruction, and communicate with families, ultimately promoting children's learning and development.

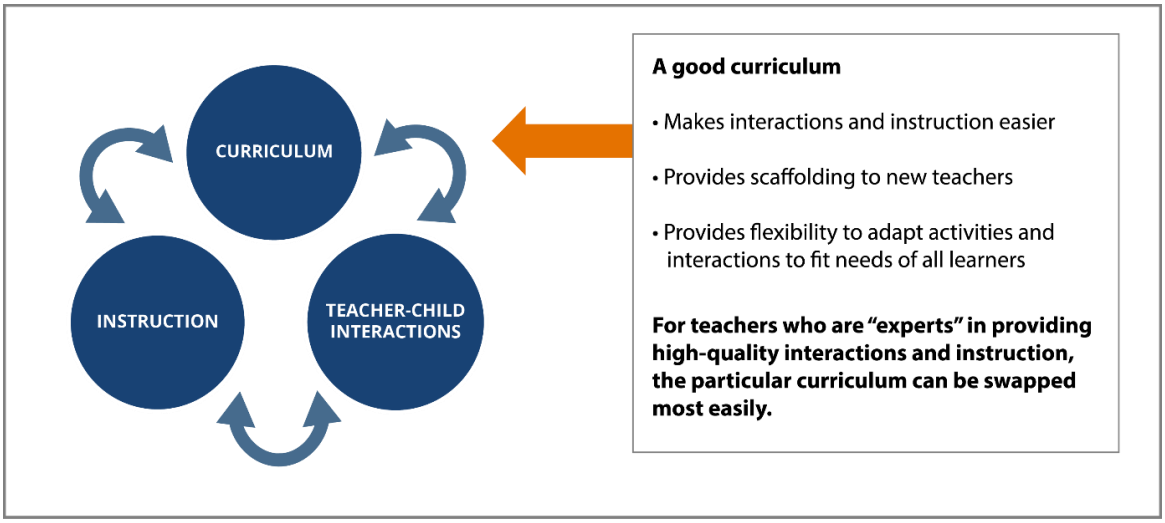
Best Practice

Selecting a Vetted, Evidence-Based Comprehensive Curriculum
A core component of a high-quality early education experience is that children are provided opportunities, experiences, and materials that allow them to engage deeply within developmental/early learning domains to build their school readiness skills. For VPI, Virginia's Foundation Blocks for Early Learning articulates the skills and knowledge young children need to demonstrate by the end of preschool in order to be successful in kindergarten.

Using effective curricula helps ensure that children are afforded the opportunities, activities, and interactions within the classroom that support their learning and development of critical school readiness skills.

An effective integrated and comprehensive curriculum, when fully implemented, makes it easier and more efficient for teachers to engage in sensitive, responsive, and cognitively stimulating domain-general teacher-child interactions, as well as domain-specific teacher-child interactions, which foster specific school readiness skills.

FIGURE 2-1: Illustration of How Curriculum Fosters Higher Quality Classroom Interactions



It should be noted that the terms "evidence-based," "effective," and "research-based" (often used interchangeably) are used to describe curricula in order to indicate effectiveness or legitimacy. These terms occupy such a broad definition, though, that it is necessary to distinguish among different types of evidence.

For example, a curriculum may have positive, causal effects on children's learning outcomes compared to a control group; it may have descriptively been shown that children who receive a curriculum are doing well in school; or a curriculum may draw upon developmental science and theory in the design of its learning activities. Depending on one's particular definition, all of these curricula may be labeled as "effective" or "evidence-based" or "research-based."

Currently, there is not sufficient evidence to indicate that one comprehensive curriculum performs better than other comprehensive curricula in promoting children's outcomes. In addition, evidence does not suggest that using a single comprehensive curriculum is better than using a combination of targeted/domain-specific curricula (Weiland, McCormick, Mattera, Maier, & Morris, 2018). Data *do*, however, support that the use of a curriculum is better than using no curriculum (Carlson, Curby, Brown, Trygstad, Truong; 2017; Lonigan et al., 2015; Weiland, 2016). In addition, there is general consensus on the core components expected to be included in a comprehensive curriculum (Fonseca, 2016; NCQTL, 2015; Weiland et al., 2018). Figure 2-1 summarized what is considered to be the core components of a comprehensive curriculum. Note that a separate Comprehensive Curriculum Guide provides further detail on each of these components. Given this, it is reasonable that multiple curriculum packages could be available for programs to adopt within VPI if they meet core comprehensive curricula components. Below the plan highlights two of these components—Professional Development and Ongoing Assessments—as they impact the extent to which teachers are provided the support they need to implement their chosen curriculum with fidelity and the extent to which implementation of the chosen curriculum will enhance student learning.

TABLE 2-1: Core Comprehensive Curriculum Components

Core Comprehensive Curriculum Components
Evidence-Based: Grounded in Child Development Principles and Research Studies Provide Support for Improved Teacher Practice and Child Learning
Comprehensive Across Learning Domains
Provides Depth for Each Covered Learning Domain
Provides Specific Learning Goals
Incorporates Well-Designed Learning Activities
Supports Responsive Teaching
Provides Supports for Individualized Instruction
Culturally and Linguistically Responsive
Incorporates Ongoing Assessments
Provides Professional Development Opportunities to Ensure High-Quality Implementation
Includes Family Involvement Materials

To determine how to move forward, the VDOE had each VPI program self-report which curricula they are currently using and then asked CASTL to determine the extent to which the curriculum packages could be considered evidence-based comprehensive curriculum packages. See Table A-2 in Appendix A for additional details.

CASTL employed a three-step process to review the extent to which a curriculum was evidence-based. First, they determined if the curriculum had been reviewed through the US Department of Education's What Works Clearinghouse, which sets the highest bar for evidence. Next, they determined which curricula have been reviewed through the National Center for Quality Teaching and Learning (NCQTL)'s Preschool Curriculum Consumer Report. This report reviewed commonly used comprehensive curriculum for both evidence of effectiveness and the inclusion of core components. Finally, they conducted a literature review to determine if any new research was available on effectiveness of any of the used curriculum. No studies were found that would indicate any changes.

What CASTL found is that **most comprehensive curricula have not been rigorously evaluated**. This is quite different than saying that the curricula lack evidence because they were evaluated and found ineffective. Given this, NCQTL and others (e.g., the Louisiana Department of Education) have reviewed comprehensive curricula based on the core components that should be present in a comprehensive curriculum if it were expected to have positive effects on children's learning. Based on the NCQTL review across the other categories, CASTL recommended that the following curricula that are already being used in VPI as they include most of the core components for a comprehensive curriculum:

- Creative Curriculum
- Frog Street Pre-K
- HighScope
- Opening the World of Learning (OWL)
- Scholastic Big Day for PreK
- Tools of the Mind

See also Curriculum Policies and Guidelines of the Preschool Development and Expansion Grant Programs for an easy to interpret summary table of the NCQTL review. Although the resources used to review the curricula used in VPI classrooms were not developed specifically for Virginia, they are appropriate for such use. To support this conclusion, CASTL cross-referenced the Virginia's Foundation Blocks for Early Learning, the Virginia Department of Social Services (VDSS) Developmental Milestones, and Head Start's Early Learning Framework. They found that the Virginia Preschool Building Blocks and the VDSS

Developmental Milestones are highly aligned across sub-domains. Appendix A presents a crosswalk of these three developmental frameworks.

Importance of Implementation

Even the best curriculum will only be effective in producing children's early learning gains when it is implemented as intended with the highest fidelity (Durlak & DuPre, 2008). Teachers must be able to implement the curriculum activities as designed.

Simply providing teachers with curriculum materials is not enough to support their implementation. Teachers and their leaders need training and ongoing support to implement all of the components of a curriculum with high fidelity. For example,

- Teachers need access to all curriculum materials and introductory trainings,
- Program leaders should be fully versed in the curriculum, and
- Divisions need curriculum experts who can provide ongoing and on-demand training and support.

Individualized coaching and regular feedback are most effective in improving preschool teachers' use of instructional strategies (Pianta, Mashburn, Downer, Hamre, & Justice, 2008). Offering professional development in a variety of ways, with both initial and ongoing training, can facilitate implementation by teachers and staff.

In order to know whether or not a curriculum is being used effectively and to provide targeted training and support to teachers and leaders, one must be able to measure how well a curriculum is being implemented. Valid and feasible observation tools are needed to understand how well a curriculum is being implemented in order to provide the right level of support to teachers. For example, CLASS® observations do not provide information on curriculum implementation or whether teachers are using engaging, developmentally-appropriate, and responsive domain-specific interactions that support specific school readiness skills (e.g. CLASS® does not measure the quality of math or literacy instruction).

Thus, it is critical for a curriculum package to have reliable and feasible tools to monitor and assess implementation. For example, implementation checklists can track the dosage and adherence areas and observation protocols can rate the quality of curriculum component delivery (e.g. how well a small group activity was administered, whether the activity was differentiated for children at different skill levels).

Ongoing Assessment

The most effective programs and curricula include an ongoing assessment component (Barnett, 2008). Assessments should be reliable and valid as these tools are only useful to the extent that they consistently and accurately assess the constructs they are meant to represent. Effective curricular assessments link to both the curriculum activities and to children's learning outcomes. In order to facilitate use and meaningfulness, assessments should be user-friendly to administer and interpret and provide guidance for how teachers should tailor future instruction to better match children's learning needs (Galinsky, 2006).

In addition to using assessment to strengthen classroom instruction, standardized assessments may also be used across VPI programs to know how children are gaining key school readiness skills during preschool. For example, the Phonological Awareness Literacy Screening Pre-K (PALS Pre-K) is a literacy screener that is currently required in all VPI programs. PALS-PreK has a fall, midyear and spring form and there are fall and spring developmental ranges to guide teachers in understanding areas of relative strength and areas needing more growth. PALS-PreK provides individual task scores, as well as an overall score and assessment addresses alphabet knowledge, beginning sound and rhyme awareness (i.e.,

phonological awareness), name writing, print and word awareness, and nursery rhyme awareness. These areas of early literacy development are supported by over 20 years of early literacy research.

Yet PALS Pre-K does not measure math, social or self-regulation skills. Requiring a more comprehensive assessment for all VPI classrooms would allow the state to begin to track children's growth from the beginning of preschool through the end of kindergarten in the areas of math, self-regulation, and social skills in addition to literacy skills. It would, however, likely result in additional costs in terms of materials, training and implementation.

Action Steps

1. **Adopt a short list of integrated, comprehensive curricula that VPI programs must choose from or request a review of an alternative option**
   The VDOE will establish a short list of approved comprehensive curricula from which programs that take VPI funding must choose. The list will be finalized by February 2019 and this requirement will go into effect in 2019-2020 as a condition of the 2019-2020 VPI Program Guidelines. If programs are using another integrated, comprehensive curriculum that was not included in this process or was created by local educators, the program may request a departmental review. The VDOE, working with CASTL, will determine whether the curriculum should be added to the approved list. Subject to General Assembly approval, competitive funding may be made available to support divisions to purchase and implement integrated, comprehensive curriculum in all classrooms. Divisions will need to apply for the funding and funding will be prioritized based on need and strength of implementation plans. Note that programs will have a one-year grace period for 2019-2020 if they request an extension provided they produce a plan for implementing the curriculum no later than the 2020-2021 school year.

   This approach enables the state to assure all classrooms are using quality curriculum while also offering local choice so that communities can use the option that best meets their needs. The state can also be more proactive in recommending professional development and supports for a limited selection of curriculum options, thus ensuring the professional development is also of quality. This approach would likely reduce the upfront cost, as a substantial number of divisions and classrooms are already implementing an approved curriculum. Divisions that are not already using an approved comprehensive curriculum will need to submit their curriculum for review and/or adopt a new curriculum.

2. **Create checklist to clarify expectations for curriculum implementation, including use of ongoing assessment in addition to PALS Pre-K.**
   The VDOE will create a checklist to support divisions to successfully implement curriculum with fidelity. For example, one of the first things that divisions should do is ensure that all teachers, educational specialists, coaches, and leaders have been trained on the curriculum, whether that is a new training or refresher if training was several years ago. Divisions should also ensure that all classrooms have access to all necessary curricular materials. Similarly, divisions should ensure teachers are using ongoing assessment to evaluate children's skills and knowledge and use that information to adapt their instruction. The VDOE will release the checklist for the 2019-2020 school year, as well as provide guidance to divisions.

3. **Observe curriculum implementation and gather data.**
   Using the checklist and other materials provided by the curriculum vendors, divisions should ensure that VPI coordinators, principals and/or coaches observe classrooms to determine how

well teachers are fully implementing their curriculum. Starting in 2019-2020, all sites will be required to submit a completed checklist so this data can be aggregated and analyzed at the state level. At the local level, this information can be used to provide feedback to teachers as well as inform professional development. See Professional Development section for more detail.

4. **Use corrective action where curriculum is not being implemented effectively.**
   Starting in 2020-2021, the VDOE will have better information on what curriculum is being used and how effectively it is being used. The VDOE will audit a sample of these curriculum to test accuracy. For communities that are not using approved curriculum or are not implementing curriculum effectively, the VDOE will use corrective action to support the adoption and effective implementation of approved curriculum. Divisions will be required to complete and implement a corrective action plan as a condition of their funding.

Funding and Resources Needed

To achieve the desired outcomes, the following funding and resources are needed:

Funding Needed	One Time or Ongoing	Purpose
$125,000	Ongoing	Supports 1 FTE VDOE staff to create curriculum implementation checklist and other guidance materials, monitor implementation observations and manage corrective action for programs that do not effectively implement curriculum
$800,000	Ongoing until 2022	Supports purchase and implementation of vetted, evidence-based curriculum assuming 20% of classrooms require new curriculum, materials and/or training at ~$3,500 per classroom
N/A	Ongoing	Support for ongoing professional development on using curriculum and ongoing assessment to promote children's learning and development is covered in the Professional Development section
To be determined	Ongoing (One-Time)	Supports build and maintenance of data system to track implementation of curriculum and ongoing assessment. There would be a one-time cost for designing and building the system with ongoing maintenance cost.

Note that the approximately $2 million currently budgeted for incentives for provisionally-licensed VPI teachers that will likely go unused could be repurposed to cover these costs in FY20.

How Success Will Be Measured

To ensure VPI classrooms are effectively using curriculum and assessment to prepare Virginia children for kindergarten, the following measures of success should be tracked and monitored:

- % of VPI Classrooms using approved curriculum
- % of VPI Classrooms monitored that are implementing with fidelity, including use of ongoing assessment
- % of VPI Classrooms that are in corrective action, and how many are able to move out of corrective action within expected timeline

3. Assessing Teacher-Child Interaction Quality

Desired Outcomes

- All VPI teachers will be observed at least two times a year with the Classroom Assessment Scoring System (CLASS®), a valid and reliable observation tool that measures the quality of teacher-child interactions, by local observers who will also provide targeted feedback and professional development for ongoing quality improvement purposes.
- All VPI teachers will be also observed at least every two years with the Classroom Assessment Scoring System (CLASS®) by external observers to provide a statewide baseline and measure the accuracy of observers on ongoing basis.
- All classroom observation data will be aggregated to the levels of center, program, and division to gauge both the quality of local observers and interactions across the state.

Current Practice

- All VPI teachers who work in schools are observed annually using locally-developed teacher evaluation criteria and tools that are consistent with the statewide *Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers.* Only VPI+ teachers are observed using the CLASS®.
- Incomplete standardized data exist on the quality of interactions and instruction in VPI classrooms across the state. As only 47 school divisions participate in Virginia Quality (Virginia's Quality Rating and Improvement System). In contrast, there is CLASS® data on all VPI+, Head Start and child care classrooms participating in Virginia Quality.

Best Practice

Over the past two decades, researchers have focused on understanding the elements of teachers' interactions that promote positive development. High-quality preschool interactions include a well-organized and managed classroom, social and emotional support, and instructional interactions that stimulate children's thinking and skills (Hamre & Pianta, 2007), and can be reliably measured using the Classroom Assessment Scoring System (CLASS®, Pianta, LaParo & Hamre, 2008). Figure 3-1 shows the CLASS® domains and dimensions (for a more comprehensive definition of the dimensions, see Table B-1 in Appendix B). CLASS® dimensions are scored on a 1-7 scale, with higher scores reflecting higher interaction quality. Scores are often reported at the domain level (Emotional Support, Classroom Organization, Instructional Support); although, a few studies average all the dimensions together to provide one overall score.

To date, dozens of observational studies utilizing *CLASS®* across a range of early childhood education programs show that children who experience higher observed teacher-child interactions also show higher levels of social-emotional and pre-academic development (see CLASS® Outcomes Studies). Because *CLASS®* offers a valid, reliable window into the critical interactions children experience within classrooms, these assessments are poised to contribute to quality improvement efforts. In fact, high-quality professional development can improve these classroom interactions (Hamre et al., 2012, Li Grining et al., 2014). As such, twenty-two states currently use *CLASS®* in their state or QRIS system, as a progress monitoring tool, to inform professional development targets, and/or as part of a rating system (Teachstone, 2017).

Effective, engaging interactions serve as the foundation for learning in early childhood classrooms. As such, measuring these interactions consistently and using them to provide feedback lies at the heart of

offering high-quality, enriching experiences for all children. The following best practices regarding at-scale observation of these interactions, with detailed attention to the CLASS® observation system, come from an examination of similar initiatives across communities, research studies and states.

FIGURE 3-1: Domains and Dimensions of the CLASS® tool

- **Communicate early and often, with transparency.** Observation initiatives proceed well when communities know why they are being observed, what they are being observed on and how/with whom observation data will be shared. Successful initiatives proactively engage stakeholders early in the process and provide transparency in the project goals and expectations (i.e., that CLASS® data will be used formatively, for improvement efforts).
- **Ensure *CLASS*® observers are trained to and supported in maintaining reliability**. Any CLASS® initiative requires observers to be CLASS® trained to reliability. This involves observers taking a two-day CLASS® reliability training where observers learn about and practice utilizing CLASS®, as well as passing a reliability exam that shows observers code within 80% of 1 score with CLASS® master coders across 5 observation segments. Further, once observers are certified reliable, they engage in regular coding checks to maintain their accuracy of CLASS® use.
- **Ensure observation data are translated into a useful form for teachers.** For observational data to be useful to teachers, feedback must be understandable, objective, and specific. Teachers benefit from information that includes a description of the given range for each CLASS® dimension (low/mid/high) and clear examples within each area. Further, for this feedback to add meaningfully to a teacher's practice, more regular observations throughout the school year are necessary.

What do national studies utilizing CLASS® data tell us about the level of quality observed?
In the past two decades, multiple national level studies utilized CLASS® to examine preschool and Head Start quality. The National Center for Early Development and Learning (NCEDL) Multi-State Study of Pre-Kindergarten of 240 funded preschool programs in six states during the 2001-2002 school year. The same data collection strategy was utilized in the State-Wide Early Education Programs (SWEEP) study, in which they collected pre-kindergarten data in 465 preschool programs in five states during the 2003-2004 school year (CLASS® data summaries for NCEDL and SWEEP). Note that dimensions slightly differed in the earlier versions of CLASS®). In addition, the full CLASS® scale was included in the 2009 and 2014

nationally-representative sample of children in Head Start (Family and Children Experiences Survey). Table 3-1 summarizes the CLASS® scores within domains across these 4 large scale studies.

TABLE 3-1: CLASS® Quality in National Studies of Preschool and Head Start

	NCEDL 2001-2002	SWEEP 2003-2004	FACES 2009	FACES 2014
Emotional Support	5.27 (SD: 0.80)	5.59 (SD: 0.84)	5.3 (SD: 0.5)	5.4 (SD: 0.5)
Classroom Organization	4.42 (SD: 0.90)	4.47 (SD: 1.04)	4.7 (SD: 0.6)	4.8 (SD: 0.7)
Instructional Support	3.44 (SD: 0.84)	2.00 (SD: 0.92)	2.3 (SD: 0.6)	2.4 (SD: 0.9)

Based on the illustrative CLASS® scores presented on a 1-7 scale, patterns emerge. Across these national studies, Emotional Support was consistently in the mid-high range, Classroom Organization was consistently mid-range, and Instructional Support was low. Important to note, however, classroom-to-classroom variability was high, with many classrooms exhibiting higher or lower quality interactions than the overall average.

Considerations in Setting CLASS® Quality Thresholds

As requested by the General Assembly, the VDOE, in partnership with CASTL, has gathered data about setting threshold for the CLASS®.

In considering ways to set a quality threshold, a decision needs to weigh whether 1) the expectation should be set statistically or conceptually, 2) an overall quality threshold (where all dimensions are averaged to create a single score for quality) or threshold by CLASS® domain should be used and 3) consequences or incentives should be attached to the threshold.

Burchinal and colleagues (2010) provide some statistical evidence to guide considerations about thresholds. In examining what level of quality was needed to promote children's development, they found that children's social outcomes were most strongly influenced when Emotional Support was at least 5. Further, children showed growth in academic skills when Instructional Support was at a minimum of 3.25, and that higher quality instruction produces more academic gains. Thus, this study provides some evidence of where thresholds need to be.

Head Start utilizes CLASS® in their Designation Renewal System (DRS) that programs engage in every three years. In this case, Head Start samples classrooms to represent programs. Thus, the CLASS® score is attributed to the program based on a sample of classrooms within the program. If programs either: 1) fall below a score of 4 on Emotional Support, a 3 on Classroom Organization and a 2 on Instructional Support, or 2) have scores that fall in the bottom 10% of grantees reviewed, they need to re-compete for funding. For the 2017 year, thresholds by domain are: Emotional Support (5.7024), Classroom Organization (5.3264) and Instructional Support (2.3095). Head Start utilizes a statistical approach, with varying quality expectations for each domain with funding consequences for low performing programs.

Most states, however, have taken a different approach than Head Start in their CLASS® rating approach. Twenty-two states currently use CLASS® in their state or QRIS system as a progress monitoring tool, to inform professional development targets, and/or as part of rating system (Teachstone, 2017). Some states utilize a summative CLASS® score approach. This is due in part that many are using CLASS® Pre-K, Toddler, and Infant and the summative score makes it easier to examine quality across all programs. In

addition, this approach rewards incremental improvements as well as offers the most overall transparency and fairness in terms of ratings.

Another approach is for states to set different quality expectations at the domain, based on the levels within the system, which enables a specific focus on each of the domains (e.g. instruction). This approach provides tiered support and recognition for increasing levels of observed quality. Table 3-2 provides a summary of the CLASS® domain scores by quality level (see Table B-2 in Appendix B for a detailed listing of states' approach to CLASS® score expectations by quality levels (compiled by Teachstone Training, LLC, 2017. Used with permission from Teachstone). Most of these systems only use the CLASS® at the top levels of their rating system; as a result, there is only data for levels 3-5.

TABLE 3-2: Summary of CLASS® Averages across Levels within Rating Systems

	Level 3	**Level 4**	**Level 5**
Emotional Support summary average	Range: 3.5-5.0 Most Common Threshold: 4.5	Range: 5.0-5.5 Most Common Threshold: 5.0	Range: 5.0-6.0 Most Common Threshold: 6.0
Classroom Organization summary average	Range: 3.5-4.5 Most Common Threshold: 4.5	Range: 4.0-5.0 Most Common Threshold: 5.0	Range: 5.0-6.0 Most Common Threshold: 6.0
Instructional Support summary average	Range: 1.0-2.5 Most Common Threshold: 2.0	Range: 1.5-4.0 Most Common Threshold: 2.5	Range: 3.0-5.0 Most Common Threshold: 3.0

Either one of these approaches – whether using summative or domain level results or thresholds – are typically accompanied with incentives, as opposed to consequences, for quality. In addition, programs typically receive professional development specifically targeted to their CLASS® scores in an effort to raise quality. This is how Virginia Quality works; it uses a threshold approach in that programs are required to score at or above a certain level in order to earn ratings at the higher level of the system. Programs receive supports to maintain their level of quality or to continue moving upward. Specifically, Virginia Quality sets thresholds at 5.00 or higher in Emotional Support/Classroom Organization domains (i.e. the average score across emotional support and classroom organization must be 5.00 or higher) and 3.25 or higher in the Instructional Support domain.

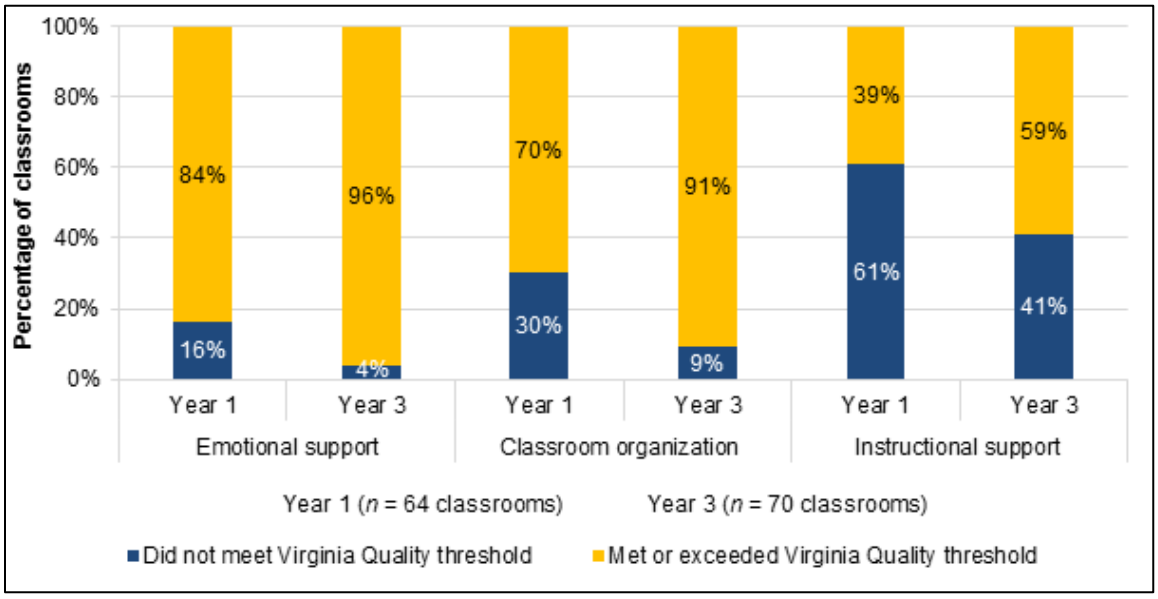
In VPI+, Virginia Quality raters observed all classrooms at least every-other year and provided programs individual classroom-level and program-level data. Virginia Quality raters, as well as CLASS-trained local coaches and coordinators, helped teachers understand their reports and plan improvements through individualized professional development.

CLASS ratings from the 2015-2016 (Year 1) to 2017-2018 (Year 3) showed meaningful, statistically significant improvements for both the cross-sectional and matched samples. Results showed that more VPI+ classrooms in Year 3, compared with Year 1, met the threshold for quality on all CLASS® domains: emotional support (96% versus 84%), classroom organization (91% versus 70%), and instructional support (59% versus 39%).

CLASS ratings, throughout the course of the VPI+ grant, have informed professional development, coaching and technical assistance. Specifically, in Year 3, a large majority of VPI+ teachers received professional development on supportive environments (91%), teacher-child interactions (89%), classroom

organization and management (86%), and supporting children with challenging behaviors (73%) (Golan, et al., 2018). This work demonstrates the feasibility of using CLASS in VPI and most importantly shows that VPI programs are able to improve the quality of classroom interactions with individualized PD.

FIGURE 3-2: Improvements to CLASS Measured in VPI+ 2015-2017: Percent of Classrooms Meeting Virginia Quality Thresholds



SOURCE: Results of SRI evaluation from 11 school divisions participating in VPI+

Lastly, it is important to note that the CLASS® was designed to measure core elements of teacher-child interactions but it does not measure every element of high-quality teacher-child interactions, nor every element of a high-quality early learning environment that contributes to children's learning. Specific to this plan, CLASS® does not measure all of the important content-related interactions that children need from teachers to learn key skills across all areas of readiness, nor does it measure the quality of curriculum implementation. While there is some overlap between the quality of teacher-child interactions, the effective use of instructional practices, and the implementation of curriculum, there is also substantial distinction across these areas of the preschool learning experience. Additional resources may be needed to capture other critical classroom elements needed to support children's successful development.

Action Steps

1. **Require all VPI classrooms be observed twice annually using the CLASS® tool by local observers in addition to external (CASTL) observations.**

   The state should require and provide per-classroom funding to ensure that all VPI classrooms are observed once in the fall and once in the spring using the CLASS®. With this funding, communities can identify school personnel (e.g. principals or VPI coordinators) to become CLASS®-certified, conduct observations, submit scores through an established procedure, write reports, and review those reports with teachers. In this case, school personnel would attend a regional CLASS® training to become certified, take the certification test and then maintain their reliability through double coding with other CLASS®-certified observers. Advantages to this approach include building local capacity and fostering shared language and understanding about quality. An additional benefit includes the observers providing individualized, direct feedback to the teachers being observed. To address concerns about bias, the state will compare the local observation results with those completed by external observers, informing observers and classrooms when results are significantly different. In addition, the state will

provide technical assistance to divisions on how to increase the reliability of local observers. Communities should have the options of using live or recorded observations. If communities choose to use video observations, the state will work with CASTL to code these observations and compare scoring.

This work will be phased in. Divisions have already opted in to participate in external CLASS observations in the 2018-2019 school year. The VDOE will seek to engage at least 50% of divisions to complete internal observations in 2019-2020. Building on this success, all classrooms should be participating by the 2020-2021 school year.

2. **Compare local and external observation results in order to ensure accuracy and drive improvement.** While local observers will need to be trained and maintain reliability, there is a strong risk their results will be biased based on prior knowledge of the classroom teachers. Thus, the VDOE will work closely with CASTL to utilize data obtained from observers outside the divisions to provide reliability checks for internal observers. These reliability checks will not only improve the overall quality of the data but will help the local observers become more reliable as the observers themselves are receiving feedback on how accurate their observations are.

3. **Create a Virginia Observation Protocol Guide.**
Regardless of who is conducting the observations, best practice dictates that the observations include four CLASS® observation cycles, that these represent typical classroom experiences, and that they are conducted by a certified observer who participates in on-going reliability checks. In addition, supplemental information regarding the classroom (i.e., number of children), curricula (i.e., program used) and teacher (i.e., years of experience) should be collected at the time of the observation to better contextualize the information gained. Working closely with CASTL, the VDOE should produce and disseminate a statewide CLASS Observation Protocol by spring 2019. The VDOE should also provide technical assistance and guidance to divisions.

4. **Set initial thresholds based on what is needed to ensure impact on children but revisit when there is more data on Virginia classrooms.**
Based on the current practice in the field, CASTL has recommended a particular approach for setting thresholds for CLASS for VPI classrooms. Specifically, CASTL recommends using a statistical approach that sets the level of quality for classrooms to achieve at the level current research says is needed to ensure positive impacts on children. They recommend having classrooms strive for a 5 on Emotional Support and Classroom Organization and a 3.25 on Instructional Support as the threshold. Current national averages suggest, however, that a large percentage of classrooms will initially fall short of this expectation. Thus, CASTL also recommends that falling below the benchmark triggers a range of high-quality professional development options. Being prepared to offer high-quality professional development through a range of options will be key to moving all VPI classrooms over the thresholds that will best support children's learning and development.

Starting in 2018-2019, the VDOE will adopt these thresholds as goals for VPI classrooms. However, there will not be any consequences attached to these thresholds. Rather, divisions will be supported to understand the close connection between teacher-child interactions and child outcomes and work with leaders and teachers to prioritize pressing needs.

For transparency purposes, the VDOE will calculate statewide averages annually. Superintendents will receive an annual report including all local and external CLASS results for their classrooms and how they compare both to the thresholds as well as statewide averages. In addition, the VDOE will revisit the thresholds once they have robust statewide results.

5. Connect VPI quality improvement efforts to the broader early childhood system in Virginia.
Currently, Head Start, VPI+, and Virginia Quality already use CLASS®. Working closely with the Department of Social Services, the Virginia Early Childhood Foundation and other partners, the VDOE will strive to align the VPI quality improvement efforts with existing initiatives. The VDOE will encourage VPI classrooms to participate in Virginia Quality. VDOE will also encourage divisions to partner with other early childhood programs locally to share and analyze data, collaborate on professional development and work collectively to improve classroom interactions and instruction.

Funding and Resources Needed

To achieve the desired outcomes, the following funding and resources are needed:

Funding Needed	One Time or Ongoing	Purpose
$175,000	Ongoing	Supports 1 FTE VDOE staff to create observation protocol and other guidance materials, monitor observation completion and accuracy, determine how many classrooms meet threshold, track improvement, produce reports, manage data quality and liaise with other quality improvement efforts Supports .5 FTE VDOE staff for administrative support
$650,000 ($725,000 in 2019-2020)	Ongoing starting in 2021 (One-Time for 2019-2020)	Supports local CLASS® observations of all VPI classrooms in the fall and spring. Amount assumes VPI coordinators or principals complete CLASS observations at average rate of $50/hour including prep, observation and debriefing which results in a per-classroom cost of $250. Statewide total for 1,300 classrooms twice annually would be $650,000. For 2019-2020, only 50% of classrooms would participate so total would be $325,000. There would also be a one-time cost of $400,000 in order to train ~500 local observers to CLASS® reliability. After this, cost of training and/or recertification would be in per-classroom costs.
N/A	Ongoing	Support for ongoing professional development on using curriculum and ongoing assessment to promote children's learning and development is covered in the Professional Development section.
$350,000	Ongoing starting in 2021	Supports CLASS assessment for 50% of VPI classrooms one time a year. Note that this is divided into two funding amounts of $350,000 for FY19 and FY20 and has already been appropriated to UVA-CASTL.
To be determined	Ongoing (One-Time)	Supports maintenance of data system that tracks classroom quality (e.g., CLASS scores) over time. There would be a one-time cost for designing and building the system with ongoing maintenance cost.

Note that the approximately $2 million currently budgeted for incentives for provisionally-licensed VPI teachers that will likely go unused could be repurposed to cover these costs in FY20.

How Success Will Be Measured

To ensure VPI classrooms are effectively providing classroom interactions and instruction to prepare Virginia children for kindergarten, the following measures of success should be tracked and monitored:

- % of VPI Classrooms observed using CLASS at least two times a year
- # and % of Site Leaders trained to CLASS reliability
- Overall average CLASS scores at site, division and state levels
- CLASS scores by domain at site, division and state levels
- Growth in CLASS scores – overall and by domain at site, division and state levels
- % of VPI Classrooms that meet threshold in each of the three domains

4. Providing Individualized Professional Development

Desired Outcomes

- All VPI teachers will receive high-quality professional development that supports their knowledge, skills, and practice to facilitate effective teacher-child interactions and instruction that promotes children's learning and development towards kindergarten readiness.
- All professional development will:
    1. Be individualized based on the classroom data (e.g. CLASS® scores or children's assessment data)
    2. Focus on standards, curriculum and/or improving teacher-child interactions; and
    3. Be delivered with fidelity with the necessary leadership and the organizational support.

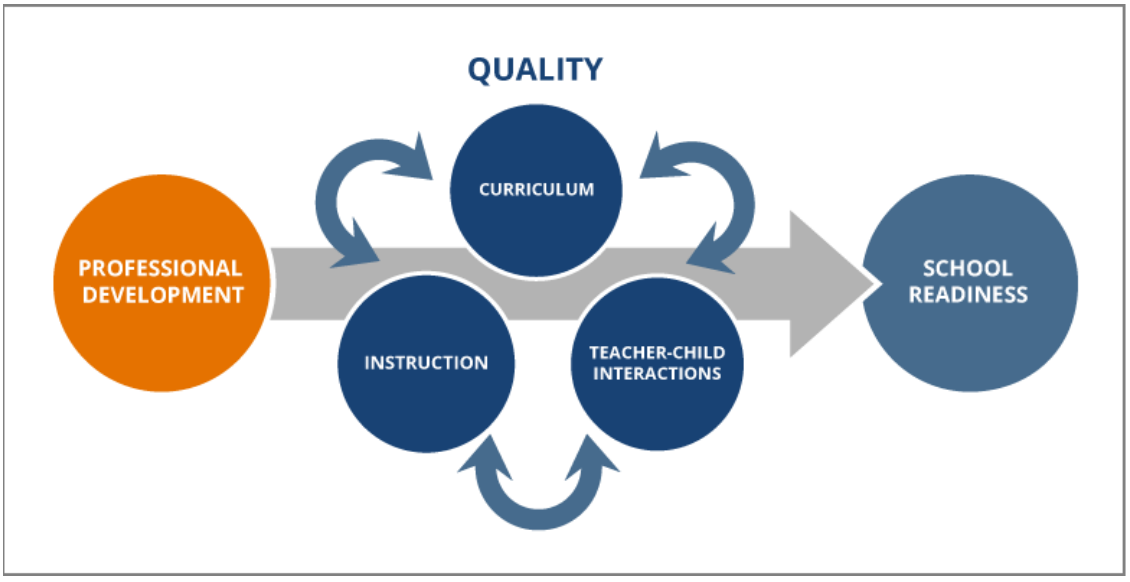
Current Practice

- All VPI teachers and instructional assistants must attend at least 15 clock hours per year of professional development focused on early childhood education topics including best-practices for implementing a high-quality preschool program. In contrasts, teachers in VPI+ school divisions are getting access to individualized professional development on critical topics such as classroom interactions and environments, content area practice, formative assessment, and individualized instruction. Each school division has hired coaches who are working closely with teachers on ensuring that every child has access to the types of interactions and learning experiences that we know promote learning and development.
- Little or no standardized data exist on the content and quality of professional development for VPI classrooms.

Best Practice

Preparing more children for kindergarten depends on the quality of early childhood teaching. And teaching quality cannot be solely defined nor achieved through a static indicator such as degree or credential earned. Rather teachers need preparation, individualized feedback and ongoing professional development and support in order to facilitate high-quality interactions and instruction that promote all children's learning and development.

FIGURE 4-1: Impact of Professional Development on School Readiness



As suggested by Figure 4-1, effective professional development can help improve the quality of curriculum implementation, interactions between teachers and students, and instructional practices in ways that improve children's school readiness. As noted by recent work in implementation science, training is a critical competency driver of implementation quality, along with leadership and organization drivers that facilitate systems changes that aid in scale-up efforts (National Implementation Research Network). In the context of early childhood education, this means that in-service teachers develop the appropriate knowledge and skills and receive ongoing professional development supports, in order to consistently deliver high-quality, effective learning opportunities to young children. Leadership and organizational capacities, particularly around data-driven decision-making, set the stage for this teacher development and child success.

The evidence base on effective forms of professional development for early childhood education teachers is growing, with recent meta-analyses indicating significant effects of training on teacher practice and child outcomes across both social-emotional and language-literacy domains (Markussen-Brown et al., 2017; Werner et al., 2016). However, a more critical question is: what kind of professional development is most effective at altering a teacher's practice in the classroom? And, in particular, how can lessons learned from the field inform how best to support teachers to provide effective and engaging interactions, implement an evidence-based curriculum well, and use assessment tools to guide instruction and continuous quality improvement in the classroom?

Looking across multiple reviews, several recurring principles are evident in articulating the core characteristics of effective professional development that will change teacher practice (Darling-Hammond, Hyler, & Gardner, 2017; Hamre, Partee, & Mulcahy, 2017; Warren & Ramminger, 2016; Zaslow & Martinez-Beck, 2005). These five principles are displayed in Table 4-1 and described in more detail below.

TABLE 4-2: Five Evidence-Based Principles for Professional Development

Evidence-based PD principles	Description
1. Specific, articulated objectives	PD objectives must delineate the precise knowledge and skills that a teacher will gain from the experience and how these will help the teacher improve one of the cornerstone elements of an effective ECE classroom.
2. Data-driven	Data should be used to plan the focus of individualized professional development and track intended outcomes.
3. Dosage	The professional development approach and format must map onto what level of intensity, duration, and follow-up are necessary to ensure that the participants gain relevant knowledge and are able to apply any new skills in the classroom.
4. Practice-focused	Effective PD has an explicit emphasis on linking new knowledge to practice in the classroom.
5. Feedback-analysis Loop	Teachers need the opportunity to adopt and implement a new practice, receive feedback about this implementation, and reflect/analyze this experience.

Effective professional development has clearly defined focus with **specific, well-articulated objectives**. These objectives delineate the precise knowledge and skills that a teacher will gain from the experience and how these will help the teacher enhance or improve one of the cornerstone elements of an effective early childhood education classroom:

teacher-child interactions, content-specific instructional practices, or curriculum. For instance, a course may target a teacher's provision of instructionally supportive interactions as defined by the CLASS tool.

A **data-driven** approach calls for use of data to plan the focus of individualized professional development and track intended outcomes. The use of data is critical to determining the focus of professional development for a center and/or specific teacher, including information about teacher practices and children's skills. Collecting data on outcomes of professional development and looking at patterns over time can provide a continuous feedback loop that highlights success and areas for improvement; it also facilitates individualization for teachers with different strengths and areas for growth.

The **dosage** of professional development is critical. A one-size-fits-all approach to professional development does not adequately address the needs of administrators, teachers and program staff. Rather, the professional development approach and format needs to map onto what level of intensity, duration, and follow-up are necessary to ensure that the participants gain relevant knowledge and are able to apply any new skills in the classroom/center. So, a brief, one-time workshop may be appropriate to learn about a new state learning standard; however, it is not sufficient to meet the objective of changing a teacher's content-specific practice to better meet the needs of children around that new learning target.

Effective, **practice-focused** professional development has an explicit emphasis on developing new knowledge **and** linking this knowledge to practice in the classroom, as suggested for adult learners by the National Research Council (2000). As part of embedding learning in the classroom, teachers need the opportunity to adopt and implement a new practice, receive feedback about this implementation, and reflect on or analyze this experience. This type of **follow-up with feedback and reflection/analysis** relevant to one's own classroom is fundamental to translating knowledge of innovative, evidence-based classrooms into effective implementation.

Just as professional development for teachers serves as an implementation support for effective instruction and curriculum utilization, implementing professional development at-scale requires attention to fidelity and factors that support (or hinder) scale-up (Hamre, Partee & Mulcahy, 2017; Fixsen, Blase, & Fixsen, 2017). Beyond the delivery of professional development informed by the five best practice principles, what factors ensure that teacher practices meaningfully change and result in improved school readiness for children? Research in implementation science points to the critical role that systems (organization factors, leadership) play in supporting teachers' implementation and ongoing use of new practices (National Implementation Research Network, 2016). Fixsen, Blase, Horner, & Sugai (2009) indicate that successful scaling "requires keeping the entire system in mind," including how teams support implementation (i.e., ensure adequate implementation capacity and fidelity), how new processes become integrated within existing structures, and how teams communicate and share data to steer ongoing improvements (Fixsen, Blase, and Fixsen, 2017; National Implementation Research Network, 2016). In particular, interaction-based innovations, such as professional development, require the support of implementation teams (Fixsen, D. L., Blase, K. A., & Fixen, A. A. M., 2017). Therefore, any plan will require coordination of activities across the state through a technical assistance (TA) network that supports local professional development providers and school division leadership teams.

In VPI+, each program used multiple sources of data (including individualized classroom data) to plan professional development (at least 30 hours per year) that was focused on key practices aligned to teacher-child interactions, curricular implementation, and individualized instruction.

- **Interactions:** Various professional development and coaching supports focused on supportive environments, classroom organization and management, and teacher-child interactions, which helped to improve teachers' skills in these areas.

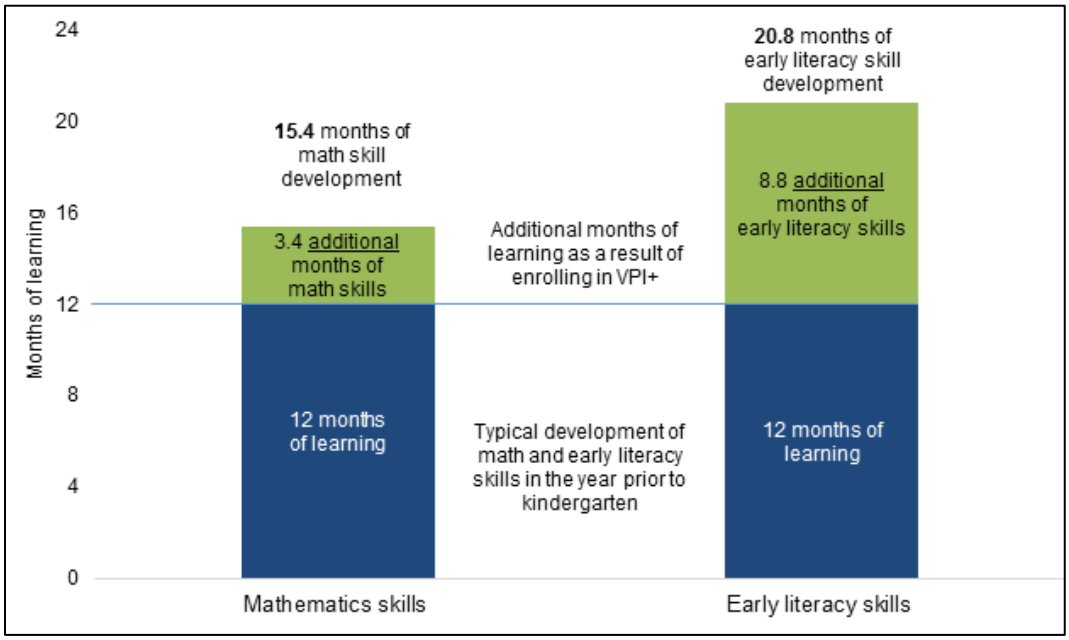
- **Curricular implementation:** At the beginning of VPI+, the majority of VPI+ teachers (68%) across divisions were implementing their program's curriculum for the first time. All VPI+ teachers using *The Creative Curriculum®*

specifically reported on the teacher survey receiving training on its use, and 72% of teachers using other curricula report receiving training on their curriculum. The majority of VPI+ teachers, regardless of curriculum, perceived the training to be moderately or very useful. Surveys indicated most VPI+ teachers reported feeling prepared to use their curriculum (Gaylor, Golan, Davis-Mercier, Thayer, Tunzi, & Williamson, 2016).

- **Individualized instruction:** VPI+ teachers used several ongoing assessments to measure children's skills, individualize instruction, and communicate with families, ultimately promoting children's learning and development.

Results of a well-controlled study by SRI International, an external evaluator, demonstrate that VPI+ had broad positive impacts on children's literacy, math and self-regulation, and oral language skills at kindergarten entry. In the 12 months between enrolling in VPI+ and beginning kindergarten, attending VPI+ led children to develop more than 15 months of mathematics skills and more than 20 months of literacy skills (compared to a group of children who did not attend VPI+). These impacts are consistent with findings from other analyses of high-quality public preschool programs and demonstrate how participating in high-quality PreK programs with well-supported teachers accelerate children's important school readiness skills.

FIGURE 4-2: Regression Discontinuity Findings from VPI+



SOURCE: Results of SRI evaluation from 11 school divisions participating in VPI+

Coaches hired in each program helped develop individualized professional development plans for each teacher that defined specific, articulated objectives for professional development with sufficient dosage to promote change. Teachers had ongoing opportunities to receive feedback and reflect on their own progress through individualized coaching. Programs were supported to use data, plan and deliver professional development (including coaching) through training and technical assistance from state partners (CASTL and VECF). This approach to providing quality professional development resulted in measurable changes for interactions (described in the previous section) as well as children's outcomes.

Action Steps

1. **Ensure access to individualized classroom data.**
   To ensure effective professional development, the VDOE must first ensure that VPI coordinators, principals and teachers have access to the following types of data:
   1. Teacher-student interactions (general and content-specific),
   2. Curriculum implementation, and
   3. Children's skills, including but not limited to PALS Pre-K.

   Important to point out is all three of these data elements are covered in the prior sections. For example, CLASS® observations are a natural starting place, focusing on general teacher-student interactions with established links to child outcomes. This is why it is essential that all classrooms are observed multiple times a year locally, not just once every two years. Similarly, using the curriculum checklist will help divisions better understand how well curriculum is being implemented. Lastly, leaders and teachers should be regularly using child data including PALS Pre-K, curriculum-embedded assessment results and other assessment results to inform professional development. Moving forward, the VDOE needs to ensure that all division coordinators, leaders and teachers are aware of, have access to and are using this data to inform professional development. This will require the build and maintenance of a data system to support these practices across 1,300 classrooms – see Action Step 4 below.

2. **Produce a Professional Development Guide and require Divisions to ensure teachers receive individualized feedback and professional development plans.**
   Working closely with CASTL, the VDOE will produce a professional development guide and ongoing technical assistance to divisions. The Professional Development Guide will provide a set of tiered options of vetted, evidence-based professional development that divisions can choose from based on needs of their classrooms. In turn, divisions will be supported to build and/or strengthen a tiered model of professional development so that all teachers have access to basic, effective professional development, and that additional, more intensive professional development is tied to need. In this tiered model (Appendix C, Figure C-1), all teachers would get access to base Tier 1 supports: individualized CLASS® feedback, an individualized professional development plan, and group professional development for CLASS®, curriculum and VKRP. In addition, a program may choose to offer access to online courses to some teachers and/or teacher learning communities to groups of teachers. That program or another may opt to provide the most intensive 1-1 coaching to a few teachers in classrooms with the greatest needs.

   Working closely with CASTL, the VDOE will develop a professional development plan template that divisions can choose to use. Ideally, this will be an online form that can be easily completed, revised, printed and shared. Divisions will be responsible for completing professional development plans for all teachers and instructional assistants and submitting to the VDOE. The VDOE will sample a set of professional development plans and evaluate using the criteria listed above.

3. **Establish a statewide staffing and a Technical Assistance Network with CASTL.**
   Using the funding currently appropriated by the 2018 General Assembly, the VDOE will work with UVA-CASTL to establish a statewide technical assistance network for VPI programs. Initially, this network will support the following activities:
   - Introductory trainings for teachers and VPI coordinators. This will include up to 50 in-person or online trainings or a hybrid of both depending on local needs.
   - Four VPI coordinator meetings that support local leaders to implement best practices in professional development as articulated in this plan and in the professional development guide
   - Fifteen regional networking meetings to support data use, including curriculum implementation, CLASS data and PALS Pre-K or other child data. These sessions will help local leaders drive continuous improvement, which requires regularly using data to track progress and drive decision-making. Local

leaders would first collect and review data across programs/divisions, then meet regularly to discuss any challenges and ensure professional development is meeting the goal of changing teacher practice (implementation fidelity) sufficiently to improve child outcomes.

UVA-CASTL will also conduct a survey of VPI programs about current practices, capacity, curriculum, and high-quality professional development in order to individualize these activities as well as track impact over time.

In addition, UVA-CASTL will work intensively with a subset of divisions to pilot and evaluate individualized PD for 100 teachers (15%) with demonstrated need.

4. **Support all VPI teachers to be trained on VKRP (in addition to kindergarten teachers) so that they understand how kindergarten readiness is measured and can promote children's learning and development towards kindergarten readiness.**
   Starting in fall 2019, all Virginia children entering kindergarten will be assessed using VKRP. In preparation for this, all VPI teachers should understand what this assessment covers, why these sets of skills are important for readiness and be prepared to support children's learning and development across multiple learning domains. This professional development can also be used to connect VPI teachers with kindergarten teachers in order to promote more effective transitions for children. As part of this training, VPI teachers should also be prepared and supported to engage families on kindergarten readiness and how they can best support their children throughout the VPI experience.

5. **Invest in development of and training on a comprehensive data system that enables stakeholders to examine key data for informing investment decisions.**
   Virginia needs to have an electronic platform that enables easy entry of data, the ability to aggregate and disaggregate data in meaningful ways, and the capacity to link with other data necessary to inform decisions. For example, the system must be capable of linking curricular, CLASS®, professional development, and VKRP and PALS data, to ensure that resources in one area are having the intended effect in another. In addition, consideration needs to be given to what other aspects of classroom quality that should be a part of this system. This means needing to consider additional resources for new measurement development of other critical inputs to quality preschool. Data should be able to be sorted and examined at the classroom, division, and state levels. This will also enable the state to track center and teacher progress over time. This includes data on teacher-student interactions, observed fidelity of curriculum implementation, children's skills, and professional development exposure (e.g., type, dosage).

   Stakeholders then need systematic training to utilize the system and data provided. The state can foster and support stakeholders' growing skills through in-person meetings, guidebooks on best practices and on-demand consultation services. This will allow regular opportunities to track and report back on progress, promote sharing of best practices and increase buy-in to the quality initiative.

Funding and Resources Needed

To achieve the desired outcomes, the following funding and resources are needed:

Funding Needed	One Time or Ongoing	Purpose
$175,000	Ongoing	Supports 1 FTE VDOE staff to create professional development guide, template and other guidance materials, monitor professional development plan completion and accuracy, produce reports, and liaise with UVA CASTL Supports .5 FTE VDOE staff for administrative support

To be determined ($1,000,000)	Ongoing (One-Time)	Supports building and maintenance of a statewide staffing and a Technical Assistance Network with CASTL. The one-time costs reflect the $1,000,000 appropriated to CASTL for FY19 and FY20. Future year costs will be based on lessons learned from FY19 and FY20.
Already included	One-Time	Supports initial training of all VPI teachers on VKRP. The one-time costs reflect the $100,000 appropriated to CASTL for FY19 and FY20 for VKRP.
To be determined	Ongoing (One-Time)	Supports build and maintenance of data system to track type, dosage and effectiveness of professional development. There would be a one-time cost for designing and building the system with ongoing maintenance cost.

Note that the approximately $2 million currently budgeted for incentives for provisionally-licensed VPI teachers that will likely go unused could be repurposed to cover these costs in FY20.

How Success Will Be Measured

To ensure VPI classrooms are effectively supported via professional development and coaching to prepare Virginia children for kindergarten, the following measures of success should be tracked and monitored:

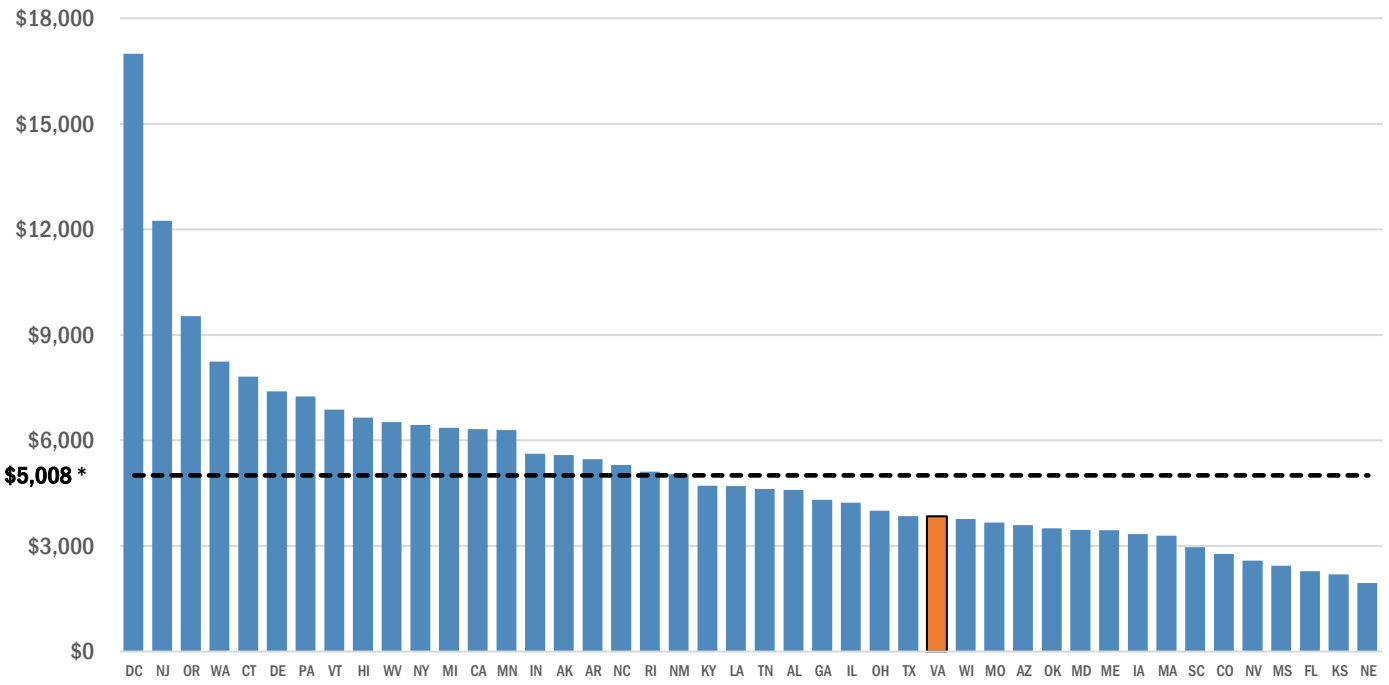
- Growth in CLASS scores and/or use of curriculum that correlates with participation in professional development
- % of Professional Development plans sampled that meet all state criteria
- % of Teachers satisfied with professional development (e.g., training, coaching)

5. Funding High-Quality Early Childhood Education

In order to provide high-quality early learning, states must make adequate investments in people, programs, and policies. As many states across the country have recognized the importance of early childhood education, total state spending on preschool has grown by $5 billion between 2002 and 2017 (NIEER, 2018). Putting additional dollars into preschool has allowed the vast majority of states to improve the quality of the programs provided, as well as number of children they reach.

However, the *State of Preschool 2017* finds that these shifts have not all kept pace with inflation and enrollment, and interstate disparities in per-pupil state spending have widened over time (NIEER, 2018). On average, states spent $5,008 per child enrolled in preschool in 2017, not including local or federal contributions. Yet, the average state investment obscures the chasm between the highest and lowest spenders, with some states contributing as much as $16,000 per student or as little $2,000. These differences in funding have also led to uneven access to high-quality programs for children across the country (NIEER, 2018).

FIGURE 5-1: Per-Student State Preschool Spending - 2017



*$5,008 represents the average investment per student across all 44 states providing preschool in 2016-17.
SOURCE: The State of Preschool 2017 by National Institute for Early Education Research (2018)

Best Practice

Despite the need for growth and improvement on a national scale, best practices have emerged for building sustainable funding structures needed for high-quality early childhood education. Foremost among these practices is combining state investments with longer-term, federal funding sources, shorter-term grants, and private dollars (NIEER 2018; Wechsler et al, 2018). Braiding different funding has allowed several states to expand their preschool programs to serve more children and provide additional supports – like coaching for teachers or quality improvement assessments. Braided

funding has taken on different forms, such as partially funding slots for eligible students with Head Start or IDEA funds, combing state- and Head Start classrooms, or securing development grants to build out burgeoning programs. This diversification of funding sources helps to ensure the stability of investments across shifting budgets and political landscapes.

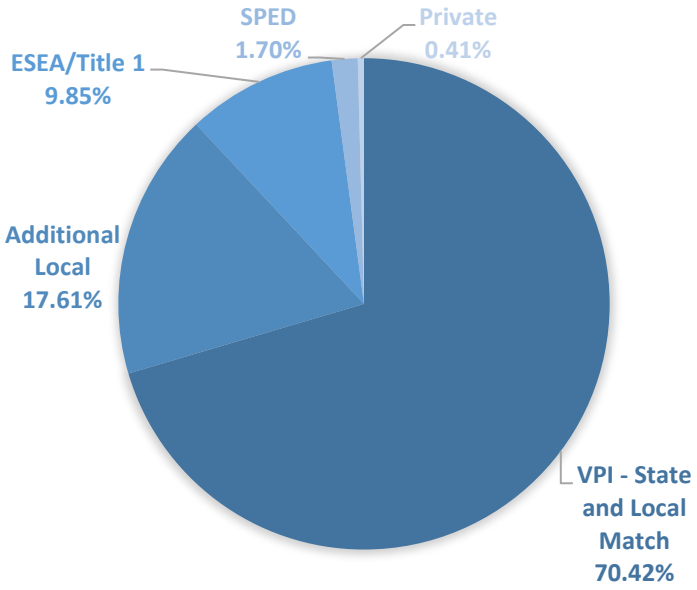
While states with exemplary early childhood educational programs have been savvy in incorporating alternative funding sources, they continue to provide the vast majority of the money needed for preschool programs. In fact, most of these states strive to spend as much per student on early childhood programs as they do in K-12 education (Wechsler et al, 2018). This kind of dedicated funding takes some fiscal pressure off of local offices, which are often operating on limited budgets with minimal staffing and resources.

Current Funding in Virginia

Virginia ranked 29th in spending and access among the 44 states in the country that provided preschool during the 2016-17 school year, investing $3,845 per student and enrolling 18% of four-year olds (NIEER, 2018). While the average per-pupil spending increases to $6,100 when factoring in local match contributions, this number suggests that, overall, Virginia invested less in early childhood education than the majority of states in 2017.

However, Virginia is poised to improve, and has already taken steps to increase its investments. In the 2017-18 school year, Virginia allocated additional money towards the per-pupil costs of preschool, raising the base amount to $6,125 after the local match. On top of this base investment, many VPI program providers reported supplementing their funding with additional local, federal, and private dollars. In fact, according to a survey of all VPI administrators in the summer of 2018, divisions gleaned 30% of their overall VPI budget from additional local contributions, federal programs, and private partnerships, bringing the average per-pupil spending to over $8,600. Of this money, an average of $7,628 per pupil goes to fund personnel costs, approximately $400 goes to transportation, $275 is spent on curriculum, about $100 funds professional development, and less the $25 per student is spent on assessment (for full break down, see Table 5-1: Breakdown of VPI Spending by Category).

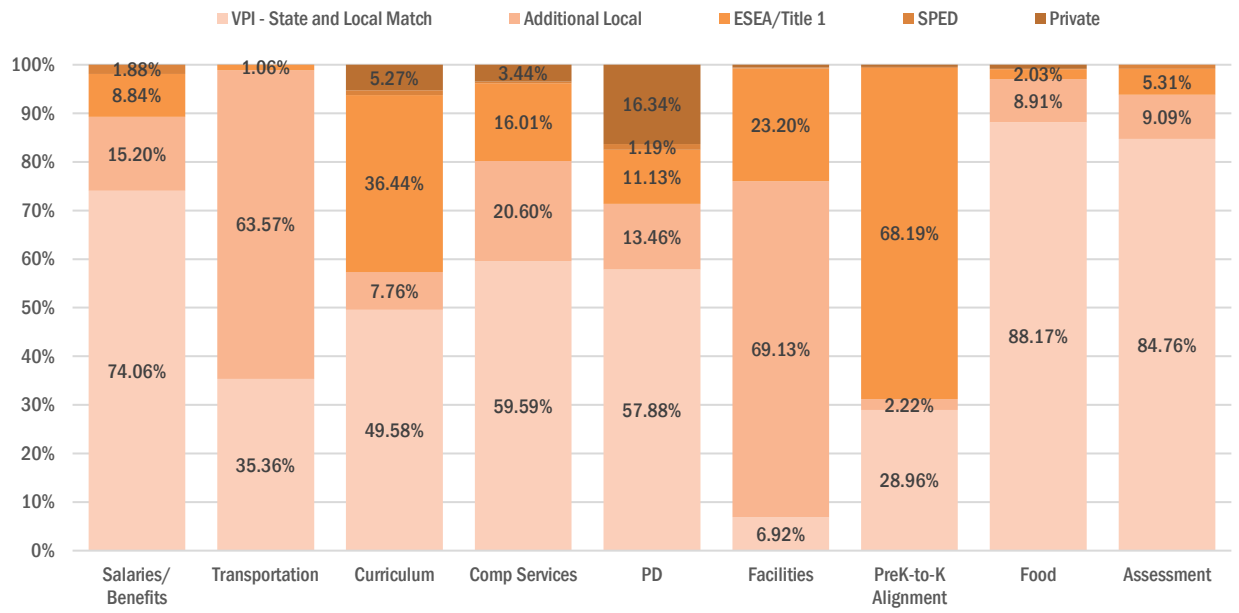
FIGURE 5-2: Sources of VPI Funding – Average Across Divisions



SOURCE: VDOE Summer 2018 Survey of School Divisions on Use and Sources of VPI Funds

These additional funds allowed divisions to invest in a wider array of programmatic needs. While VPI state and local match dollars account for the majority of funding across most spending categories, some divisions rely heavily on external money to supplement the costs of transportation, curriculum, facilities, and pre-k to kindergarten alignment efforts.

FIGURE 5-3: Sources of Funding for Each Spending Category



SOURCE: VDOE Survey of School Divisions on Use and Sources of VPI Funds

NOTE: Label for percentages smaller than 1% are suppressed.

Still, incorporating money from alternative sources has not been enough to meet the needs of most divisions, and some VPI programs have been more successful at securing supplemental funding than others. In terms of meeting the local demands for preschool, more than 90 school divisions had to waitlist students in the 2017-18 school year due to lack of available slots. And though many divisions were able to tap into additional funding sources, they varied largely in the local, federal, and private money they were able to add to their base VPI. More than 15% of participating divisions added no additional money to their VPI programs, compared to 20% of divisions that contributed $5,000 or more per student through braided funding. A large portion of this variation can be attributed to the lack of funding, support and expertise needed to successfully utilize external funding streams.

While diversifying funding has given divisions some flexibility to cover additional programmatic expenses, many important areas remain neglected, with most VPI providers investing more in transportation than professional development, curriculum, and assessment combined. Even though divisions spend an average of nearly 90% of their budget on personnel costs, preschool teacher salaries fall well below salaries for K-12 teachers with equivalent degrees and experiences. This makes hiring and retaining high-quality staff difficult, and contributes additional costs associated with higher rates of turnover (Whitebook, McLean, & Austin, 2016). Increasing state investments in early childhood education – particularly for those divisions that have fewer available resources – would help to increase the quality of the preschool experience for VPI students.

TABLE 5-1: Breakdown of VPI Spending by Category – Average across Divisions

Category	Average Allocation	Average Per-Pupil Spending	% of Division Funding
Salaries/ Benefits	$1,086,745.81	$7,628.01	87.7%
Transportation	$60,216.84	$421.46	4.9%
Curriculum	$39,475.07	$275.97	3.2%
Comp Services	$13,729.15	$95.90	1.1%
PD	$13,275.58	$92.75	1.1%
Facilities	$8,721.22	$61.15	0.7%
PreK-to-K Alignment	$7,292.58	$51.07	0.6%
Food	$6,581.39	$45.83	0.5%
Assessment	$3,456.51	$24.10	0.3%
Total	**$1,239,494.14**	**$8,696.25**	**100.0%**

SOURCE: VDOE Summer 2018 Survey of School Divisions on Use and Sources of VPI Funds

Recommendations for Funding in Virginia

In order to make the recommended investments in curriculum, professional development, and assessments, the state must provide sufficient money towards the implementation of high-quality preschool.

As suggested by the spending data discussed in prior sections, the vast majority of the current division-level VPI budget goes towards staffing expenses, with few finances left to cover other crucial programmatic areas. Therefore, any improvements or changes made to achieve the action steps articulated earlier will require additional investments, particularly if these programs seek to expand their enrollment to meet current demand while also enhancing quality.

The state has taken steps towards providing this funding, and has appropriated money for the rollout of individualized professional development as well as observations of teacher-child interactions in the 2018-2019 and 2019-2020 school years. These additional appropriations total $650,000 and $1,050,000, respectively. The state has also increased its general funding for VPI from $69,097,643 in 2018 to $72,297,411 in 2019, representing an increase of approximately $200 per child. While these investments make strides in the right direction, they are not enough to ensure that all students enrolled in VPI will have high-quality learning experiences.

Based on the recommendations laid out in this plan, the state is making a significant investment in the VPI. This includes funding already appropriated to UVA-CASTL and would require an re-appropriation of funding dedicated to supporting provisionally licensed teachers to become fully licensed. Noting that this funding is likely to be under-utilized, approximately $2 million may be re-appropriated to support divisions to purchase and implement quality curriculum and conduct CLASS observations and provide feedback. This funding would not cover the cost of designing and building a data system which is ultimately needed to track the impact of the VPI investments on child outcomes.

Even with these additional investments, Virginia's per-pupil expenditures would be less than other states with high-quality preschool programs, such as West Virginia ($9,000/student), Michigan ($6,300/student, entirely state funded), and Alabama ($7,000/student).

6. Implementation

In order to execute this plan and ensure high-quality instruction in all VPI classrooms, the VDOE, with CASTL, will need to thoughtfully implement the action steps and track progress over time. To support an effective implementation, the VDOE will engage in the following activities:

Continued Stakeholder Engagement
Starting in November 2018, the VDOE will engage a broader set of stakeholders to seek their input on the content and implementation of the Plan. The VDOE, with support from CASTL, engaged a set of stakeholders in September 2018 to get initial feedback. With a more complete plan and detail, the VDOE will not only go back to those stakeholders but engage a broader set of Virginia and national stakeholders. Specific activities will include posting the plan and accepting online feedback, engaging VPI+ leaders and teachers through collaborative sessions, and pursuing feedback from university and national experts.

Communication to the Field
The VDOE will also need to communicate new expectations to Virginia School Boards, superintendents, VPI coordinators, principals, teachers and families. Starting in November 2018, the VDOE will use all channels, including Superintendent's Memos, VDOE website, VPI+ blog, etc. to communicate the plan. As the plan and appropriations are finalized, the VDOE will also revise the 2019-2020 VPI Program Guidelines and disseminate broadly. The VDOE will also conduct webinars with the field to explain the different elements of the plan in Spring 2019. This will be especially important at the field prepares for the full implementation of VKRP in fall 2019.

Ongoing Tracking of Progress
Once the plan is finalized, the VDOE will work with CASTL to create a tracking document to ensure the successful implementation of the plan. Ultimately, doing this effectively over time will require a data system as indicated in earlier sections. But, in the interim, the VDOE is committed to tracking progress manually.

Appendix A: Supplements to Ensuring Use of Evidence-Based Curricula

TABLE A-1: Crosswalk Between VA Foundation Blocks, VA Milestones, and Head Start Outcomes

Domains	Foundation Blocks Sub-Domains	Milestone Strands	Head Start Framework
Literacy	Oral language	√	√
	Vocabulary	√	√
	Phonological awareness	√	√
	Letter knowledge & Early Word Recognition	√	√
	Print & Book Awareness	√	√
	Writing	√	√
Mathematics	Number & Number Sense	√	√
	Computation	X	√
	Measurement	√	√
	Geometry	√	√
	Data collection & Statistics	√	X
	Patterns & Relationships	√	√
Science	Scientific Investigation, Reasoning, & Logic	√	√
	Force, Motion, & Energy	√	X
	Matter/Physical Properties	√	√
	Matter/Simple Physical & Chemical Reactions	X	X
	Life Processes	√	X
	Interrelationships in Earth/Space Systems	√	X
	Earth Patterns, Cycles, & Change	√	X
	Resources	X	X
History and Social Science	History/Similarities & Differences	√	X
	History/Change Over Time	√	X
	Geography/Location	√	X
	Geography/Descriptive Words	√	X
	Economics/Worlds of Work	√	X
	Economics/Making Choices & Earning Money	√	X
	Civics/Citizenship	√	X
Health & Physical Development	Skilled Movement/Locomotor Skills	√	√
	Skilled Movement/Non-Locomotive Skills	√	√
	Skilled Movement/Manipulative Skills	√	√
	Movement Principles & Concepts	√	√
	Personal Fitness	√	X
	Responsible Behaviors	√	√
	Physically Active Lifestyle	√	X
	Health Knowledge & Skills	√	√
	Information Access & Use	√	X
	Community Health & Safety	√	√
Personal & Social Development	Self-Concept	√	√
	Self-Regulation	√	√
	Approaches to Learning	√	√
	Interaction with Others	√	√
	Social Problem Solving	√	√
Music	Music Theory/Literacy	√	X
	Performance	√	X
	Music History & Cultural Context	X	X

	Analysis, Evaluation, & Critique	√	X
	Aesthetics	√	X
Visual Arts	Visual Communication & Production	√	X
	Art History & Cultural Context	X	X
	Analysis, Evaluation, & Critique	√	X
	Aesthetics	√	X

TABLE A-2: List of Primary and Secondary Curricula Used Across All Divisions

Division Name:	Primary Curriculum:	Secondary Curriculum:
Accomack County	OWL	Every Day Math
Albemarle County	HighScope	Math QS
Alexandria City	Creative Curriculum	HighScope
Alleghany County		Creative Curriculum
Amelia County		OWL
Amherst County	H-M PreK: Where Bright Futures Begin	
Appomattox County	Little Treasures	
Arlington County	OWL	HighScope
Augusta County	Blueprint for Early Literacy	
Bedford County	HighScope	
Bland County	Big Day for PreK	
Botetourt County	We Can by Voyager	Handwriting Without Tears
Bristol City	Tools of the Mind	
Brunswick County	Creative Curriculum	
Buchanan County	OWL	Sing, Spell, Read and Write
Buckingham County	Splash into PreK	
Campbell County	OWL	
Caroline County	Houghton-Mifflin Alpha Friends	HighScope
Carroll County	OWL	Second Step
Charles City County	Splash into PreK	
Charlotte County	OWL	
Charlottesville City	HighScope	
Chesapeake City	Big Day for PreK	
Chesterfield County	Creative Curriculum	
Clarke County	Blueprint	
Colonial Beach	Big Day for PreK	Creative Curriculum
Colonial Heights City	Big Day for PreK	
Covington City	OWL	Super Kids Reading for PreK & Big Math
Culpeper County	Creative Curriculum	ABC Music and Me
Cumberland County	Little Treasures	
Danville City	Big Day for PreK	
Dickenson County	H-M PreK: Where Bright Futures Begin	
Dinwiddie County	Splash into PreK	
Emporia	OWL	SRA Language for Learning
Essex County	Big Day for PreK	
Fairfax City	Creative Curriculum	Fairfax County Program of Studies
Fairfax County	Creative Curriculum	Fairfax County Program of Studies
Falls Church City	Creative Curriculum	Frog Street Sing and Read
Fauquier County	Big Day for PreK	
Floyd County	Big Day for PreK	

Fluvanna County	Splash into PreK	Learning Without Tears
Franklin City	Big Day for PreK	
Franklin County	Creative Curriculum	Al's Pals
Fredericksburg City	Creative Curriculum	
Galax City	Splash into PreK	
Giles County	Creative Curriculum	PATHS
Gloucester County	Scholastic Preschool for All	Teacher-Created Curriculum
Goochland County	Creative Curriculum	
Grayson County	Big Day for PreK	
Greene County	H-M PreK: Where Bright Futures Begin	
Greensville County	OWL	SRA Language for Learning
Halifax County	Big Day for PreK	
Hampton City	Doors to Discovery	Growing with Mathematics
Hanover County	Frog Street Pre-K	Second Step
Harrisonburg City	Frog Street Pre-K	OWL
Henrico County	Creative Curriculum	
Henry County	HighScope	
Highland County	Creative Curriculum	
Hopewell City	Creative Curriculum	
Isle of Wight County	Houghton-Mifflin Education Place	
James City County	Creative Curriculum	Big Day for PreK
King George County	Creative Curriculum	InvestiGator Club
King and Queen County	Splash into PreK	Wilson FUNdations
Lancaster County	OWL	Bright Starts
Loudoun County	H-M PreK: Where Bright Futures Begin	
Louisa County		Developing Number Concepts for PreK
Lunenburg County	Creative Curriculum	
Lynchburg City		Creative Curriculum
Madison County	Creative Curriculum	
Manassas City	Footsteps 2 Brilliance	Locally Developed
Manassas Park City	Creative Curriculum	
Martinsville City	H-M PreK: Where Bright Futures Begin	
Mecklenburg County	Big Day for PreK	
Montgomery County	H-M PreK Curriculum Theme Box	Handwriting Without Tears
Nelson County	Splash into PreK	
New Kent County	Bright Stars	Local Resources
Newport News City	Understanding by Design	Units of Study
Norfolk City	Creative Curriculum	
Northampton County	Big Day for PreK	
Northumberland County	Big Day for PreK	
Norton City	Big Day for PreK	
Nottoway County	H-M PreK: Where Bright Futures Begin	

Orange County	Creative Curriculum	Core Knowledge Preschool Sequence
Page County	Super Kids Happily Ever After	Frog Street PreK
Patrick County	Frog Street Pre-K	
Petersburg City	Creative Curriculum	
Pittsylvania County	HighScope	
Poquoson City	OWL	
Portsmouth City	Portsmouth Public Schools Bright Start Curriculum	
Powhatan County	Splash into PreK	
Prince Edward County	Creative Curriculum	
Prince George County	Creative Curriculum	Letter People
Prince William County	HighScope	Conscious Discipline
Pulaski County	Frog Street Pre-K	Every Day in PreK
Radford City	Creative Curriculum	Teacher Created
Richmond City	Creative Curriculum	High Scope
Richmond County	Creative Curriculum	
Roanoke City	Tools of the Mind	
Roanoke County	Tools of the Mind	
Rockbridge County	Creative Curriculum	Blueprints for Literacy
Rockingham County	H-M PreK: Where Bright Futures Begin	
Russell County	OWL	
Salem City	Creative Curriculum	Handwriting without Tears
Scott County	Happily Ever After	Houghton Mifflin Math
Shenandoah County	Starfall Pre-K	I Can Problem Solve; Handwriting without Tears
Smyth County	Tools of the Mind	
Southampton County	Splash into PreK	
Spotsylvania County	Creative Curriculum	
Stafford County	Creative Curriculum	Zoo-phonics
Staunton City	Blueprint for Early Literacy	Creative Curriculum
Suffolk City	HighScope	Houghton Mifflin
Surry County	Surry County Public Schools Curriculum	
Sussex County	Creative Curriculum	
Tazewell County	Tools of the Mind	SRA Imagine It!
Virginia Beach City	Big Day for PreK	Virginia Beach Curriculum
Warren County	Big Day for PreK	
Washington County	Splash into PreK	
Waynesboro City	Big Day for PreK	
Westmoreland County	Big Day for PreK	BrightStart
Winchester City	Creative Curriculum	
Wise County	Frog Street Pre-K	
Wythe County	Frog Street Pre-K	
York County	Creative Curriculum	

Appendix B: Supplements to Assessing Teach-Child Interaction Quality

TABLE B-1: CLASS® Domains, Dimensions, & Indicators

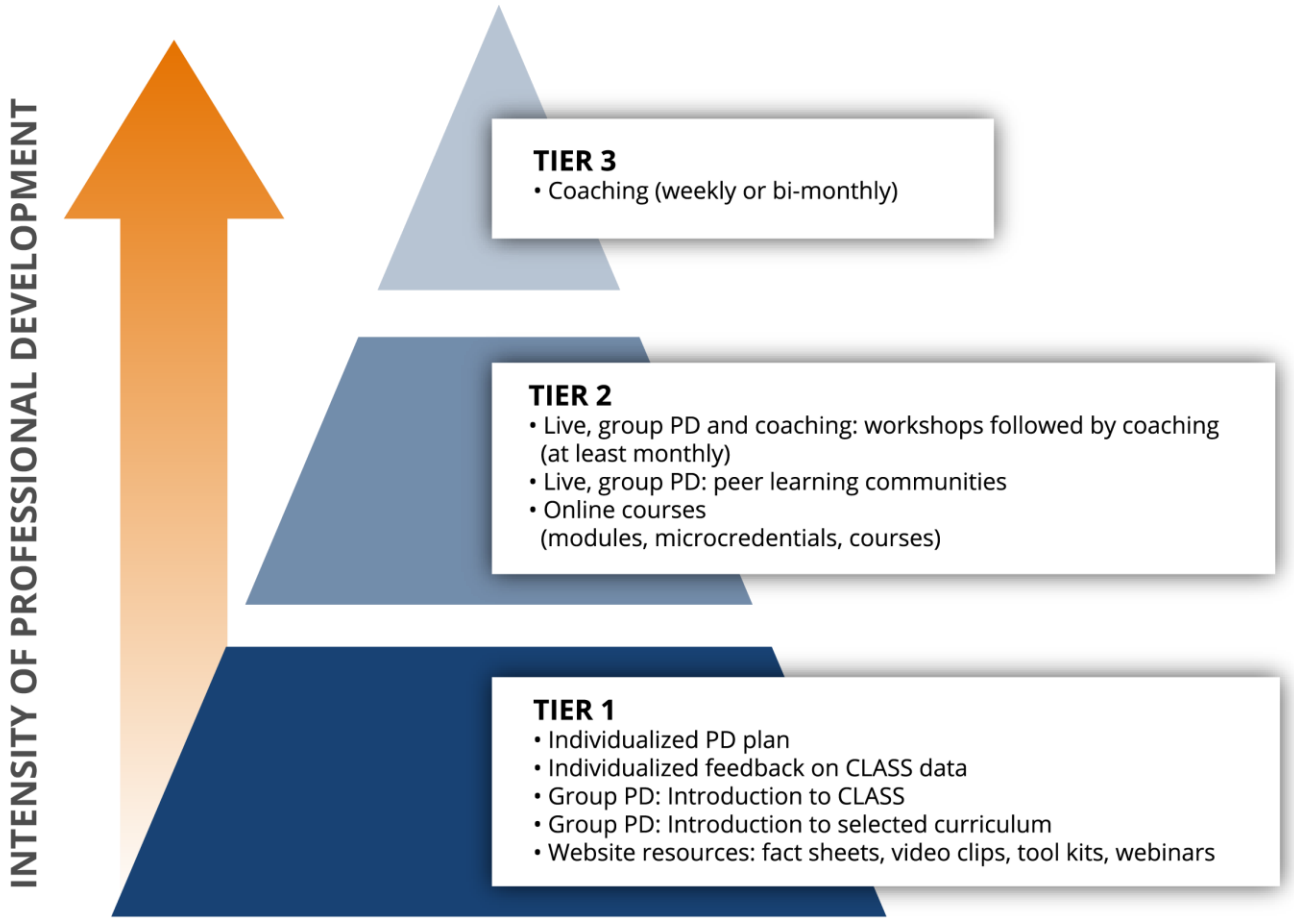
Domain	Dimension	Indicators
Emotional Support	**Positive Climate:** Reflects the emotional connection between the teacher and students and among students, as well as the warmth, respect, and enjoyment communicated by verbal and nonverbal interactions.	• Relationships • Positive Affect • Positive Communication • Respect
	Negative Climate: Reflects the overall level of expressed negativity in the classroom; the frequency, quality, and intensity of teacher and peer negativity are key to this scale.	• Negative Affect • Punitive Control • Sarcasm/Disrespect • Severe Negativity
	Teacher Sensitivity: Encompasses the teacher's awareness of and responsivity to students' academic and emotional needs; high levels of sensitivity facilitate students' ability to actively explore and learn because the teacher consistently provides comfort, reassurance, and encouragement.	• Awareness • Responsiveness • Addresses Problems • Student Comfort
	Regard for Student Perspectives: Captures the degree to which the teacher's interactions with students and classroom activities place an emphasis on students' interests, motivations, and points of view and encourage student responsibility and autonomy.	• Flexibility and Student Focus • Support for Autonomy and Leadership • Student Expression • Restriction of Movement
Classroom Organization	**Behavior Management:** Encompasses the teacher's ability to provide clear behavioral expectations and use effective methods to prevent and redirect misbehavior.	• Clear Behavior Expectations • Proactive • Redirection of Misbehavior • Student Behavior
	Productivity: Considers how well the teacher manages instructional time and routines and provides activities for students so that they have the opportunity to be involved in learning activities.	• Maximizing Learning Time • Routines • Transitions • Preparation
	Instructional Learning Formats: Focuses on the ways in which the teacher maximizes students' interest, engagement, and ability to learn from lessons and activities.	• Effective Facilitation • Variety of Modalities and Materials • Student Interest • Clarity of Learning Objectives
Instructional Support	**Concept Development:** Measures the teacher's use of instructional discussions and activities to promote students' higher-order thinking skills and cognition and the teacher's focus on understanding rather than on role instruction.	• Analysis and Reasoning • Creating • Integration • Connections to the Real World
	Quality of Feedback: Assesses the degree to which the teacher provides feedback that expands learning and understanding and encourages continued participation.	• Scaffolding • Feedback Loops • Prompting Thought Processes • Providing Information • Encouragement and Affirmation
	Language Modeling: Captures the quality and amount of the teacher's use of language-stimulation and language-facilitation techniques.	• Frequent Conversation • Open-Ended Questions • Repetition and Extension • Self- and Parallel Talk • Advanced Language

TABLE B-2: Summary of CLASS® Quality Ratings Across States

CLASS® Domain	Level 3	Level 4	Level 5
Emotional Support	Arizona: 4.5 Colorado: 4.5 Florida (Miami-Dade): 5.0 Florida (Palm Beach): 4.5 Florida (Duval): 5.0 Nebraska: 4.0 Washington: 3.5	Arizona: 5.0 California: 5.0 Colorado: 5.5 Florida (Miami-Dade): 5.5 Florida (Palm Beach): 5.0 Florida (Duval): 5.5 Illinois: 5.0 Nebraska: 5.0 Virginia: 5.0 Washington: 5.0	Arizona: 6.0 California: 5.5 Colorado: 6.0 Florida (Miami-Dade): 6.0 Florida (Palm Beach): 6.5 Florida (Duval): 6.0 Illinois: 5.0 Nebraska: 6.0 North Dakota: 5.0 Oregon: 5.0 Virginia: 6.0 Washington: 6.0
Summary average	**Range:** 3.5-5.0 **Most Common Cut Score**: 4.5	**Range:** 5.0-5.5 **Most Common Cut Score:** 5.0	**Range:** 5.0-6.0 **Most Common Cut Score:** 6.0
Classroom Organization	Arizona: 4.5 Colorado: 4.5 Florida (Miami-Dade): 4.0 Florida (Palm Beach): 3.5 Florida (Duval): 4.5 Nebraska: 4.0 Washington: 3.5	Arizona: 5.0 California: 5.0 Colorado: 5.0 Florida (Miami-Dade): 4.5 Florida (Palm Beach): 4.0 Florida (Duval): 5.0 Illinois: 5.0 Nebraska: 4.0 Virginia: 5.0 Washington: 5.0	Arizona: 6.0 California: 5.5 Colorado: 6.0 Florida (Miami-Dade): 5.0 Florida (Palm Beach): 5.5 Florida (Duval): 5.0 Illinois: 5.0 Nebraska: 6.0 North Dakota: 5.0 Oregon: 5.0 Virginia: 6.0 Washington: 6.0
Summary average	**Range:** 3.5-4.5 **Most Common Cut Score:** 4.5	**Range:** 4.0-5.0 **Most Common Cut Score:** 5.0	**Range:** 5.0-6.0 **Most Common Cut Score:** 6.0
Instructional Support	Arizona: 2.0 Colorado: 2.0 Florida (Miami-Dade): 2.0 Florida (Palm Beach): 1.0 Florida (Duval): 2.5 Washington: 2.0	Arizona: 2.5 California: 3.0 Colorado: 2.5 Florida (Miami-Dade): 2.5 Florida (Palm Beach): 1.5 Florida (Duval): 2.5 Illinois: 4.0 Nebraska: 3.5 Virginia: 3.25 Washington: 3.5	Arizona: 3.0 California: 3.5 Colorado: 3.0 Florida (Miami-Dade): 3.0 Florida (Palm Beach): 3.0 Florida (Duval): 3.26 Illinois: 4.0 Nebraska: 5.0 North Dakota: 3.0 Oregon: 5.0 Virginia: 4.25 Washington: 4.5
Summary average	**Range:** 1.0-2.5 **Most Common Cut Score:** 2.0	**Range:** 1.5-4.0 **Most Common Cut Score:** 2.5	**Range:** 3.0-5.0 **Most Common Cut Score:** 3.0

Appendix C: Supplements to Providing Individualized Professional Development

FIGURE C-1: Tiered Professional Development



Appendix D: Supplements to Funding

TABLE D-1: Average VPI Spending by Category across Divisions

	VPI Funding – State & Local Match		Additional Funding Sources								Combined Funding (Additional and VPI)	
			Additional Local		*ESEA and Title 1*		*Special Education*		*Private*			
	Allocation	% VPI	Allocation	% Local	Allocation	% ESEA/ Title 1	Allocation	% SPED	Allocation	% Private	Allocation	% All Funding
Salaries/ Benefits	$804,898	92.5%	$165,158	75.7%	$96,056	78.7%	$20,433	96.9%	$201	4.0%	$1,086,746	87.7%
Transportation	$21,290	2.4%	$38,278	17.5%	$637	0.5%	$12	0.1%	$0	0.0%	$60,217	4.9%
Curriculum	$19,573	2.2%	$3,065	1.4%	$14,386	11.8%	$372	1.8%	$2,079	41.1%	$39,475	3.2%
Comp Services	$8,181	0.9%	$2,828	1.3%	$2,198	1.8%	$50	0.2%	$472	9.3%	$13,729	1.1%
PD	$7,684	0.9%	$1,787	0.8%	$1,477	1.2%	$158	0.7%	$2,169	42.9%	$13,276	1.1%
Facilities	$603	0.1%	$6,029	2.8%	$2,023	1.7%	$16	0.1%	$49	1.0%	$8,721	0.7%
PreK-to-K Alignment	$2,112	0.2%	$162	0.1%	$4,973	4.1%	$12	0.1%	$34	0.7%	$7,293	0.6%
Food	$5,803	0.7%	$586	0.3%	$133	0.1%	$4	0.0%	$55	1.1%	$6,581	0.5%
Assessment	$2,930	0.3%	$314	0.1%	$183	0.2%	$29	0.1%	$0	0.0%	$3,457	0.3%
Statewide Totals												
	Allocation	% All Funding	Allocation	% All Funding	Allocation	% All Funding	Allocation	% All Funding	Allocation	% All Funding	Allocation	% All Funding
	$108,192,290	**70.4%**	**$27,057,178**	**17.6%**	**$15,136,247**	**9.9%**	**$2,614,777**	**1.7%**	**$627,416**	**0.4%**	**$153,627,908**	**100%**

SOURCE: VDOE Summer Survey of School Divisions on Use and Sources of VPI Funds
NOTES: Avg. allocation represents the average amount divisions allocate to each category from the indicated funding source (e.g., base VPI, additional local, ESEA/Title 1, etc.). The statewide totals indicate the sum across all divisions from each funding source.

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