

Project Early Kindergarten-Early Reading First

*Final evaluation report on a Saint Paul
Public Schools initiative*

AUGUST 2010

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Executive summary

Program overview

The federal Early Reading First program provides financial support to transform early childhood centers into “centers of excellence” that promote language and cognitive skills and a strong early reading foundation. In 2006 Saint Paul Public Schools received a three-year, \$3.8 million grant through the initiative. Saint Paul used its funds to expand its Project Early Kindergarten (PEK) program to an additional two schools and two child care centers.

From 2006-07 through 2009-10, Project Early Kindergarten – Early Reading First (PEK-ERF) operated as a partnership between Saint Paul Public Schools, Wilder Child Development Center, and Bethel University King Family Foundation Child Development Center. The program provided pre-kindergarten education to 3- and 4-year-olds in Saint Paul, and targeted those who were low-income, English Language Learners, or needed Special Education services.

PEK-ERF served a total of 164 children during its fourth and final year of programming, from September 1, 2009, to May 31, 2010. Following their participation in PEK-ERF, the schools and child care centers will continue to participate in the PEK program.

Mirroring PEK, PEK-ERF applied a rigorous academic approach to early education, aligning pre-kindergarten education with the district’s K-12 academic reform model, the Project for Academic Excellence. The program emphasized standards-based learning, extensive professional development, parent education and support, and a community-wide approach involving both schools and child care settings. Participating schools and child care centers

implemented the literacy-rich *Doors to Discovery* curriculum.

Research methods

Wilder Research conducted an independent evaluation of PEK-ERF, working in conjunction with Saint Paul Public Schools’ Department of Research, Evaluation and Assessment. Research-based assessment tools measured children’s academic progress and classrooms’ support for language and literacy. Assessments conducted in the spring of children’s pre-kindergarten year also provided measures of their school-readiness.

Activities and results

The program achieved a number of successes during its program years:

- Most participants fell into one or more of the program’s three target categories.
- Overall, teaching staff were positive about their involvement with the program and its training and coaching.
- Observations found that overall, teachers provided strong emotional and instructional support and classroom organization.
- Classrooms showed overall improvement in the extent to which they promoted literacy and language development.
- All classrooms observed were found to have implemented a majority of the indicators of alignment with the Project for Academic Excellence.
- Classrooms showed strong implementation in curriculum and instruction, and classroom environment components.
- Generally, program implementation results were stronger in the later years than the first year.

Compared to their peers nationally, 4-year-olds in both school and child care settings made faster progress in English receptive vocabulary on average.

- Based on teachers' ratings of oral language, reading, and writing, PEK-ERF participants appeared to make faster progress than peers in a national sample.
- Additional assessments measuring alphabet knowledge, print and word awareness, and other measures of early language and literacy also showed improvements for both 3- and 4-year-olds on average, although it is difficult to know at this point how progress compares to typical development.
- Generally, student achievement results were higher in the second and third years than the first and fourth years.

Issues for consideration

PEK-ERF showed strong implementation efforts. Implementation is an ongoing process, and the program gathered valuable information during the fourth and final year on ways to continue strengthening these efforts. Staff can use the following evaluation insights to inform future planning for their continuation with the PEK program.

- Variations existed among classrooms in the extent to which they were literacy-rich, their alignment with the Project for Academic Excellence, and teacher-student interactions.

Staff can use classroom-level results to target coaching to individual classrooms.

- Program staff may want to figure out a way to help teachers better incorporate assessments into their lesson plans, rather than viewing assessments as a separate activity.
- Program staff can explore ways to boost children's progress. Across language and literacy assessments, 4-year-olds at school sites made more improvements than 4-year-olds at child care center sites. Shorter programming days may contribute to the lower student results in 2009-10 than in the previous years.
- The program can continue to work toward increasing parents' understanding of how best to support their children's learning, including how often they take their children to the library and check out books, and how often they allow their children to watch television.

Looking ahead

PEK-ERF evaluation results can provide valuable information as the district continues to work with community child care providers to offer the PEK program. Results can also be used to help ensure consistency across 4-year-old programs in the district and to align them with the Project for Academic Excellence.

Introduction

“The mission of Early Reading First is to ensure that all children enter kindergarten with the necessary language, cognitive, and early reading skills for continued success in school.”

—(U.S. Department of Education, 2007a)

National Early Reading First

The federal No Child Left Behind Act of 2001 added two new reading programs to the Elementary and Secondary Education Act. Reading First supports evidence-based reading instruction in kindergarten through third grade (USDOE, 2007b). Early Reading First (ERF) supports high-quality early education for preschool-age children. ERF awards grants to help improve early childhood centers serving primarily low-income children, with the goal of transforming them into “centers of excellence” that promote language and cognitive skills and an early reading foundation (USDOE, 2007a). As stated by the U.S. Department of Education in its own language (USDOE, 2007a), ERF funds must be used to do the following:

- Enhance children’s language, cognitive, and early reading skills through professional development for teachers;
- Provide early language and reading development and instructional materials as developed from scientifically based reading research;
- Provide preschool-age children with cognitive learning opportunities in high-quality language- and literature-rich environments;
- Use screening assessments to effectively identify preschool-age children who may be at risk for reading failure; and
- Improve existing early childhood programs by integrating scientifically based reading research into all aspects of the program (including instructional materials, teaching strategies, curricula, parent engagement, and professional development).

Local Early Reading First

In 2006 Saint Paul Public Schools (SPPS) received a three-year, \$3.8 million ERF grant. The program began serving children in January 2007, with a shorter initial programming year spanning January 8 through July 31, 2007. The 2008-09 school year marked the third year of the program. With approval from the U.S. Department of Education, the project received a one-year extension, allowing the project to offer ERF programming through May 31, 2010. This grant initiative built on the work of the district's previous ERF project, Children Have Opportunities in Centers of Excellence (CHOICE). Personnel from CHOICE assisted in the development of the proposal for the more recent ERF initiative and were involved in its implementation. Learning from the previous grant also informed the more recent initiative.

Expanding Project Early Kindergarten

Saint Paul used its ERF funds to expand its Project Early Kindergarten (PEK) program. PEK began in 2005 and provides pre-kindergarten education primarily to low-income children, English Language Learners, and children needing Special Education services in Saint Paul. PEK takes a rigorous academic approach to early education, aligning pre-kindergarten education with the district's K-12 academic reform model, the Project for Academic Excellence. The program emphasizes standards-based learning, extensive professional development, parent education and support, and a community-wide approach involving both schools and child care settings.

In 2008-09, the district consolidated its pre-kindergarten programs and decided that all pre-kindergarten programs, except the Montessori programs, would use the PEK model. The consolidated program is called the Saint Paul Public Schools' Pre-Kindergarten Program. However, the former name, Project Early Kindergarten (PEK), is still being used in this report and other PEK program evaluation reports.

The PEK program is funded primarily by Saint Paul Public Schools and The McKnight Foundation, with the Minnesota Early Learning Foundation contributing start-up funds to the child care portion. The federal ERF grant provided additional funds to two of the PEK schools (Eastern Heights and Highwood Hills) and two of the PEK child care centers (Bethel University King Family Foundation Child Development Center and Wilder Child Development Center). This report presents final results of the local ERF evaluation, which focused on these two schools and two child care centers. Hereafter, PEK-ERF refers to the portion of Project Early Kindergarten covered by the federal ERF grant, and PEK refers to the portion of Project Early Kindergarten funded by the district and McKnight.

PEK-ERF

PEK-ERF followed the “Early Childhood Workshop,” a preschool classroom framework developed for PEK. With sensitivity to young children’s developmental needs, the framework emphasizes standards-based early education and alignment with the Project for Academic Excellence. The Early Childhood Workshop provides daily rituals and routines that structure the daily activities of participating classrooms. Like PEK, PEK-ERF implemented the Early Childhood Workshop framework in all sites, with variations based on individual sites’ needs. However, PEK-ERF differed somewhat from PEK in its curricula. In conjunction with the Early Childhood Workshop, PEK-ERF implemented the literacy-rich *Doors to Discovery* curriculum in both elementary school and child care settings. In PEK, child care centers implement *Doors to Discovery*, school teachers develop lesson plans to use within the Early Childhood Workshop framework, and family child care providers follow a theme-based curricular model developed specifically for them. As with PEK, PEK-ERF also provided extensive professional development in the form of teacher training sessions and on-the-job coaching, and promoted parent involvement in children’s learning.

Children who were 3 or 4 years old as of September 1 of the program year were eligible to participate in PEK-ERF. Some children attended the program for two years. The program targeted children who were low-income, English Language Learners, or needed Special Education services.

For the first three years (2006-07 through 2008-09), all PEK-ERF sites offered the program to 3- and 4-year-olds. PEK-ERF children participated in the full-day, five-day-a-week program at their child care center. At school sites, the six-and-a-half-hour day mirrored the length of the regular school day. Program services were offered year-round, including the summer months. In 2009-10, similar to PEK, PEK-ERF offered the program to 4-year-olds at school sites and 3- and 4-year-olds at child care sites. Also, PEK-ERF at schools offered a half-day program following the traditional school calendar, instead of the full-day program offered in the previous years. In future years, the PEK-ERF schools and child care centers will sustain practices of PEK program. In fall 2010, 27 Saint Paul schools, 9 child care centers, and 13 family child care homes will offer the PEK approach.

Each PEK-ERF child care site had two classrooms offering the program and each school site had one classroom, for a total of six classrooms. Each classroom at the schools had a morning session and an afternoon session that was taught by the same teacher. The program selected these sites based on their history of serving populations targeted by the program and an analysis of their potential to be transformed into “centers of excellence.” The program cited the quality, commitment, and education of staff as one of the key

strengths across sites. School sites also brought with them the district's commitment to strengthening early education programs and aligning programs with the Project for Academic Excellence. Program staff valued participating child care centers' formal associations with professional teacher preparation (Bethel University) and research (Wilder) institutions.

Contents of the report

This report provides an overview of PEK-ERF and summarizes implementation and outcomes results following the program's fourth and final year of operation, which spanned September 1, 2009, to May 31, 2010.

The following section describes program components and goals, and research methods for assessing progress toward those goals. The report then summarizes fourth-year evaluation results, starting with a section on program implementation followed by a section on program outcomes. Both the implementation and outcomes sections begin with a summary of results and conclude with a list of issues that can be considered in future planning for early childhood programs. Throughout the report are references to figures appearing in the main body of the report and the Appendix.

Program components and goals

This section provides an overview of program components and goals, as well as research methods used to assess progress toward those goals. Key components of the program included alignment with the Project for Academic Excellence, involving implementation of the Early Childhood Workshop framework; literacy-rich instruction using the *Doors to Discovery* curriculum; extensive ongoing professional development; parent education and support; and contributions to district efforts to streamline 4-year-old programs. The program established six overarching goals, with annual benchmarks supporting attainment of those goals. An independent evaluation assessed progress toward those goals and benchmarks.

Program components

Alignment with the Project for Academic Excellence

With differences based on young children’s developmental needs, PEK-ERF aimed to bring children’s preschool experience into alignment with the educational experience they would have in their K-12 years in Saint Paul Public Schools. PEK-ERF sites will continue working toward this alignment through their future participation in PEK. This educational experience centers on the Project for Academic Excellence. The district introduced the Project for Academic Excellence in 2001 as a comprehensive academic reform model. Since that time, the Project for Academic Excellence has expanded from a pilot project in selected elementary schools to a district-wide approach implemented in every grade level.

The Project for Academic Excellence emphasizes standards-based education and extensive professional development. It aligns the district’s curriculum model with state and national standards in reading, writing, math, and science. It also provides ongoing training for teachers and administrators based on national standards for effective teaching. Professional development includes best practices in standards-based instruction of core academic subjects. The model also emphasizes on-the-job coaching to help teachers develop lessons with clearly defined learning goals. Principals play an important role as instructional leaders who are involved in classrooms and oversee classrooms’ implementation of the model (Saint Paul Public Schools, 2005). In the case of PEK-ERF, this role also extended to child care center directors. Underlying the model are Principles of Learning developed by the University of Pittsburgh’s Institute for Learning. These principles emphasize the role of effort-based education, rather than aptitude, in educational achievement (Saint Paul Public Schools, n.d.-a).

In the district's own language, following are the 10 core components of the Project for Academic Excellence (Saint Paul Public Schools, n.d.-b):

1. Standards-based curriculum and instruction as the foundation of reform;
2. Extensive continuing professional development for teachers and administrators;
3. Focus on a small number of core academic skills;
4. Demonstration sites to promote replication;
5. A shared sense of instructional leadership across the school and district;
6. Content-based coaching of teachers, principals, and district leaders;
7. Availability of essential materials for learning;
8. Peer support for teachers;
9. Standards-based assessment to monitor progress; and
10. Increasing to scale across the district.

Early Childhood Workshop

PEK-ERF classroom instruction and routines were guided by the Early Childhood Workshop, a preschool classroom framework developed for PEK by local and national experts in early childhood development. Materials are geared toward the developmental needs of young children and are based on best practices in early childhood education. The framework aligns instructional methods and classroom routines with the Project for Academic Excellence and emphasizes specific standards in personal and social development, language and literacy, mathematical thinking, and physical development and health. The Early Childhood Workshop is presented in a comprehensive implementation manual for teachers. Beginning in the second year of the program, PEK-ERF teachers participated in Level II Early Childhood Workshop training along with PEK staff and received the Level II version of the implementation manual.

The PEK program identified the following best practices that teachers are expected to follow in their implementation of the Early Childhood Workshop framework:

- Designing a print-rich environment;
- Following a predictive schedule with rituals and routines;
- Planning standards-based lessons in a monthly area of study;
- Implementing clearly defined centers, organized around an area of study;
- Scheduling a 50-60 minute center-based learning block;

- Adult interaction during active learning time;
- Incorporating shared reading and interactive writing techniques;
- Conducting repeated readings of classroom literature;
- Conducting three read alouds per day;
- Introducing at least three new vocabulary words each day;
- Engaging children in purposefully planned and targeted-skill small groups each day; and
- Using a variety of strategies on an ongoing basis to facilitate the home-school connection.

As addressed in the best practices, classrooms follow a structured daily classroom schedule under the Early Childhood Workshop framework (Figure A1). Rituals and routines, materials, and activities are based on research on developing language, cognitive, and early reading skills. The core of the framework is implemented in a two-and-a-half-hour morning block, and includes the following four main components:

1. *Community circle time:* Teachers deliver standards-based lessons in core content areas to the full group of students. Teachers can use a variety of techniques to deliver the lesson, including read alouds, shared reading, interactive writing, and calendar activities.
2. *Small groups:* An expectation for daily small group instruction allows teachers to differentiate instruction based on information gathered through their assessments of individual children. The literacy coach helps teachers group children based on needs identified in the assessments, and change groups over time based on changing needs. Small groups also provide children opportunities to practice cooperation and problem-solving skills.
3. *Active learning time:* Teachers help children engage in hands-on learning through independent and small group activities around the room during active learning time, considered the central part of the workshop. Learning centers offer literacy props and activities designed to extend the day's lesson.
4. *Regroup to revisit:* At the end of the workshop, students gather for a closing meeting, where the full group of children regroup and revisits the day's lesson and their work. During this time, the class may also make plans to extend an area of learning in the afternoon or on the following day.

PEK-ERF extended the Early Childhood Workshop schedule to accommodate a full day of programming. This extension included two additional literacy blocks in the afternoon: a block of time for extended learning and projects, and a block of time for additional small groups. Teachers planned instruction for these blocks that followed the needs and interests of the children and fit within the areas of study. The extended learning and projects block provided time for children to deepen their understanding and skills, encounter new problems, and incorporate newly mastered skills into their play. Teachers were encouraged to follow the children's lead and interests, while using the additional time to talk, read, and write with children. The afternoon small group block was used for an additional five-day read aloud. Teachers read the same book for five days and followed a protocol that targeted different book and print skills each day, including comprehension. On the fifth day, teachers were encouraged to have children share the stories in fun and meaningful ways. As mentioned earlier, during the fourth year child care sites continued offering a full day, but school sites moved to a half day programming.

Doors to Discovery curriculum

In both elementary school and child care settings, PEK-ERF implemented *Doors to Discovery*, a complete, literacy-focused curriculum. *Doors to Discovery* promotes oral language skills, phonological awareness, alphabet knowledge, print concepts, and a love of books in pre-kindergarten children. Literacy-enriched learning centers, referred to as "Discovery Centers," are used to integrate the curriculum into active learning activities (Wright Group/McGraw-Hill, n.d.).

The curriculum provides teachers with defined lessons organized by themes or areas of study. The PEK-ERF literacy coach worked with teachers to help them incorporate the theme into classroom learning centers. PEK-ERF teachers supplemented the curriculum with five-day read alouds. As described above, these involved reading the same book for five days with a different teaching point each day. Starting in 2007, PEK-ERF teachers also implemented the *Everyday Math* curriculum.

PEK-ERF purchased a variety of classroom materials to support curriculum implementation and promote children's literacy skills. For example, in addition to books and picture cards, program staff felt that English Language Learners as well as other children with low language skills needed real objects that could be manipulated during active learning time to help them master new vocabulary words. Materials purchased for participating classrooms included books related to areas of study; book kits with puppets and other props; concept- and vocabulary-building kits and games; audio tapes; alphabet and word puzzles; alphabet and number games; book easels for shared reading; writing tools; music and disc players; children's magazines; stamps, stencils, and dry erase boards; and computers and printers for classrooms that did not already have them. PEK-ERF also supported teachers' efforts in

developing classroom materials to support the areas of study. Some of the materials included a vocabulary bingo, matching games, shared reading materials, and group reading kits. For positive behavior supports, teachers developed a vocabulary wheel to teach children about emotions, a problem solution kit, and a book to help children develop problem-solving skills.

Professional development

As with the Project for Academic Excellence and PEK, PEK-ERF emphasized extensive ongoing professional development. Program standards for professional development included that it be research-based, aligned with the principles of the Project for Academic Excellence, and focused on helping teachers build skills in the four areas of preschool literacy: oral language, phonological awareness, print awareness, and alphabet knowledge. Professional development activities aimed to improve the quality of teaching, model instruction after research-based best practices, improve the classroom environment, provide strategies for engaging families, and help teachers inform their instruction with information gathered in student assessments.

The program's professional development took place both in the form of formal training sessions and coaching of teachers. Training sessions were conducted by professional trainers, including consultants from the University of Minnesota's Center for Early Education and Development and the University of Saint Thomas. A consultant from Ohio State University who was previously with the University of Virginia's Preschool Language and Literacy Lab also provided staff professional development on interpreting and using results from the Classroom Assessment Scoring System PreK (CLASS PreK). Also, the PEK assistant director, Saint Paul Public Schools' School Readiness and Community Kindergarten manager, PEK coaches and parent educators, and PEK-ERF program manager facilitated the trainings (Figure A1). For sustainability, PEK-ERF program during the final year put greater focus on building the capacity of community child care center partners by equipping the directors and assistant directors with the skills to coach their own teachers. Child care directors and assistant directors worked with the PEK-ERF coaches twice every month to develop their coaching skills. The formal training sessions provided the directors and assistant directors with information on reliability and implementation of assessment tools (e.g., CLASS and ELLCO) and practices for ongoing use.

A literacy coach worked individually with school and child care teachers and assistants each week to help them incorporate strategies and activities from the training provided. The literacy coach reinforced training topics by observing classrooms, modeling strategies learned in training, and coaching teachers one-on-one based on their individual needs. The coach also worked with teachers to establish goals and to plan their weekly lessons. The program viewed strong relationships as integral to successful coaching, and the coach

worked to establish a rapport with teachers, assistants, child care center directors, and school principals. The coach, in turn, also received ongoing training on coaching from a master coach.

Parent education and support

As with PEK, PEK-ERF emphasized parents' involvement in their children's learning. Professional development provided during the fourth year included training on informing and involving families in a child's school readiness. The program provided parents with information and support aimed at encouraging parents to engage their children in literacy activities at home, and expanding parents' understanding of school-readiness expectations. According to program staff, both child care and school-based teachers had the opportunity to talk with many parents on a daily basis. Teachers also shared results of child assessments with parents to help parents understand children's early academic skills, progress, and needs.

Additionally, the PEK-ERF parent educator offered parent-child events and free books, and created materials for families to support their children's language and literacy learning at home. The parent educator provided each family with a *School-Home Partners in Learning* teaching resource box. The resource box contained materials to support 12 preschool themes, eight of which were specific to the *Doors to Discovery* curriculum. Each theme had a *Talk-Read-Write* child booklet and parent handout, along with *Teaching Tool* games and a *Helping your Child Learn to Read* parent handout. Using the *Teaching Tools* games (such as dice, predicting cards, truck puzzles, memory games), parents were encouraged to have fun with their children as they practiced the *Talk-Read-Write* skills. The *Helping Children Learn to Read* handout gave explicit instruction to parents on how and why to use the tools (games) at home. Teachers were also coached to incorporate these activities into their weekly lesson plans before sending materials home to families.

Streamlining district 4-year-old programs

Before PEK and PEK-ERF, Saint Paul Public Schools' early childhood programs reflected varying funding sources and populations served. Different departments administered the programs, and programs differed in their curricular approach. School programs also operated in a separate sphere from community child care programs, with no formal attempts to link curriculum or instructional practices. In 2005, the district established a planning committee to improve consistency and quality across programs for 4-year-olds. With the goal of aligning early childhood education with the Project for Academic Excellence, the committee established district standards for 4-year-old programs. The district's 2006-2011 Strategic Plan for Continued Excellence specifies early childhood program consolidation in alignment with the Project for Academic Excellence as a key action step (Saint Paul Public Schools, 2007).

It is within the context of this larger initiative to streamline early childhood programs that the district pursued PEK and PEK-ERF. Both emerged from this initiative, and also served as a catalyst within it by implementing the curricular approach and professional development that is now being promoted across 4-year-old programs. PEK and PEK-ERF continue to inform these efforts through their evaluation results. Results help determine whether program strategies warrant replication within and beyond Saint Paul. In a report to the federal government, PEK-ERF staff described the program's role in district efforts to align pre-kindergarten programs as follows:

“PEK-ERF is an important step in the ongoing district wide effort in Saint Paul to align and set consistent criteria for all district preschool programs through the work of the district's 4-Year-Old Planning Committee. The outcomes and findings from Project ERF will inform and guide future decisions about how to structure programs and allocate resources.”
—PEK-ERF program staff in report to federal government

In fall 2008, the Saint Paul Public Schools made the PEK-ERF Home-School curriculum available to all pre-kindergarten programs in the district. Two of the PEK-ERF assessments (ELLCO and CLASS PreK) used to monitor curriculum and classroom instruction are now being used in all pre-kindergarten classrooms in Saint Paul Public Schools. As mentioned earlier in this report, in fall 2010, 27 elementary district schools, 9 child care centers, and 13 family child care homes will implement the PEK approach.

Goals and benchmarks

PEK-ERF established six overarching program goals to guide its work. The goals, categorized by whether they pertain to program implementation or outcomes, follow:

Implementation goals

1. *Staff capacity*: Improve staff capacity to provide effective literacy instruction, and improve staff qualifications.
2. *Curriculum and instruction*: Improve instructional practices, curricula, and materials at each preschool site to meet the assessed needs of pre-K students.
3. *Classroom environment*: Improve the classroom environment to ensure an oral language and print-rich environment that is meaningful and culturally and linguistically appropriate.
4. *PAE alignment*: Increase standardization of practices and environments and improve student transition to kindergarten through alignment with Saint Paul's school-based reform model, the Project for Academic Excellence.

Outcomes goals

5. *Student achievement*: Increase the early readiness skills of students and ensure that all students learn the language, cognitive, and early reading skills they need to succeed in kindergarten and beyond, including the specific reading skills of oral language, phonological awareness, print awareness, and alphabet knowledge.
6. *Parent capacity*: Increase parent/family involvement in family literacy activities.

For each goal, the program established measurable annual benchmarks to assess progress. Figure 1 shows benchmarks associated with each program goal. It should be noted that Figure 1 abbreviates the titles of formal assessment tools used by the program, and complete names and descriptions of tools are provided in Figure 2.

1. PEK-ERF goals and benchmarks

Goals	Benchmarks
1. Staff capacity	<ul style="list-style-type: none"> ▪ 80% of classroom teachers and assistants who participate in both training and coaching will attend at least 10 days of professional development each year ▪ Increased teachers' knowledge and skills
2. Curriculum and instruction ^a	<ul style="list-style-type: none"> ▪ 90% of classrooms will achieve at least a 4 on ELLCO language, literacy, and curriculum subscale ▪ 90% of classrooms will achieve an average score of 3.75 or higher on ELLCO general classroom environment subscale^b ▪ 90% of classrooms will achieve an average score of 5 or higher on CLASS PreK ▪ The current curriculum theme will be represented in 7 out of 9 Discovery Centers in all of the classrooms
3. Classroom environment ^a	<ul style="list-style-type: none"> ▪ 18 out of 20 on ELLCO book subscale ▪ 19 out of 21 on ELLCO writing subscale
4. PAE alignment	<ul style="list-style-type: none"> ▪ All classrooms and teachers will demonstrate alignment with PAE

1. PEK-ERF goals and benchmarks (continued)

Goals	Benchmarks
5. Student achievement ^c	<ul style="list-style-type: none">▪ 60% of 4-year-olds will attain target scores or better on each of the three IGDI tests^d▪ 75% of 4-year-olds will score at the 50th percentile or above on TROLL based on norming sample▪ 90% of 4-year-olds will identify at least 14 of the 26 letters (PALS)▪ 90% of 4-year-olds will correctly identify 7 out of 10 possible items in the print and word awareness task (PALS)▪ Children will gain 4 standard score points or more on PPVT
6. Parent capacity	<ul style="list-style-type: none">▪ All parents will have at least 75% of responses scored as acceptable or model on Family Learning Strategies Survey▪ 90% of parents will attend a school-sponsored event

^a For 2009-10, curriculum and instruction (goal 2) and classroom environment (goal 3) are reported together.

^b The benchmark for general classroom environment for 2009-10 is 4.0 or higher.

^c For student achievement benchmarks, this table focuses on 4-year-olds' attainment of program targets.

^d Targets were based on scores attained by children entering kindergarten in Minneapolis schools.

Research methods

Wilder Research and Saint Paul Public Schools' Department of Research, Evaluation and Assessment conducted the evaluation of PEK-ERF, with Wilder Research serving as the independent evaluator. The evaluation investigated the extent to which PEK-ERF achieved the implementation and outcomes goals established for the program, with final results reported here. Evaluation results also provide insights into how well a high-quality preschool program emphasizing early literacy skills and aligned with the Project for Academic Excellence prepares children for kindergarten. The program's evaluator from Saint Paul Public Schools focused on program implementation, and Wilder Research focused on program outcomes and some areas of program implementation.

The evaluation used research-based assessment tools to measure children's academic and social skills, to assess the quality of teachers' interactions with students, and to gauge the extent to which classrooms promoted literacy and language development (Figure 2). The evaluation also used several data-collection tools and methods developed or shaped specifically for PEK-ERF. These local tools and methods gathered information on teachers' perceptions of professional development and other program components, classrooms' alignment with the Project for Academic Excellence, parent involvement, and

children's prior preschool and child care experience. These tools and methods included teacher self-administered questionnaires and focus groups, parent surveys, and a classroom observation tool used to check alignment with the Project for Academic Excellence. The evaluation also used program and district records to report participant demographics, participant attendance, teachers' attendance at professional development, and parent attendance at school events and conferences.

Children were assessed at the beginning and end of program years, and also during the year on some assessments, to provide measures of their progress and school readiness. In the case of the Peabody Picture Vocabulary Test (PPVT) and the Teacher Rating of Oral Language and Literacy (TROLL), participants' progress can be compared to that of peers in national samples. Assessments conducted at the end of children's pre-kindergarten year provided measures of their school readiness just before kindergarten entry.

2. Research-based assessment tools used in PEK-ERF evaluation

Tool	Area measured	Administration/timeline
<p>Peabody Picture Vocabulary Test III (PPVT) in 2006-07; 2007-08; and 2008-09</p> <p>Peabody Picture Vocabulary Test IV (PPVT) in 2009-10</p>	<p>Children’s receptive vocabulary (Goal 5)</p>	<p>Wilder Research staff administered to children age 4 and older. In 2009-10, staff from the University of Minnesota’s CEED conducted some of the pre-assessments.</p> <p>Administered at beginning of the program year and at kindergarten entry in Year 1; beginning in Year 2, beginning and end of program year</p>
<p>Phonological Awareness Literacy Screening (PALS)</p>	<p>Children’s alphabet knowledge and print and word awareness (Goal 5)</p>	<p>Teachers administered to 3- and 4-year-olds</p> <p>Every two months for the upper alphabet task and beginning and end of program year for the print and word awareness task in Year 1; beginning in Year 2, both tasks administered monthly for children below the 25th percentile and three to four times a year for all children</p>
<p>Teacher Rating of Oral Language and Literacy (TROLL)</p>	<p>Children’s oral language, reading, and writing (Goal 5)</p>	<p>Teachers completed for 3- and 4-year-olds</p> <p>Beginning and end of each program year</p>
<p>Work Sampling System (WSS): Developmental Checklist</p>	<p>Children’s growth in personal and social development, language and literacy, and mathematics (Goal 5)</p>	<p>Teachers completed three times each program year (fall, winter, spring) beginning in Year 2</p>
<p>Individual Growth and Development Indicators (IGDIs)</p>	<p>Children’s progress in picture naming, alliteration, and rhyming (Goal 5)</p>	<p>Administered to 3- and 4-year-olds by teachers or literacy coach</p> <p>Approximately every two months in Year 1; beginning in Year 2, monthly for children below the 25th percentile and three to four times a year for all children</p>
<p>Early Language and Literacy Classroom Observation (ELLCO or ELLCO Pre-K)</p>	<p>Classrooms’ support of literacy and language development (Goals 2 and 3)</p>	<p>Independent consultant conducted for SPPS.</p> <p>In 2009-10, SPPS assessment coach conducted the observations.</p> <p>Beginning and end of each program year</p>
<p>Classroom Assessment Scoring System PreK (CLASS PreK)</p>	<p>Quality of instructional and social-emotional interactions between teachers and students (Goal 2)</p>	<p>Independent consultant conducted for SPPS</p> <p>Beginning and end of each program year</p>

Implementation results

This section profiles students participating in the program's fourth year and discusses the program's progress toward implementation goals. The program's use of child and classroom assessments is also discussed. Progress toward outcomes goals is described in the next section of the report. Both sections present information in the following order: 1) an overview of progress, 2) detailed information on progress toward specific goals, 3) and issues for consideration. The overview section summarizes first- to fourth-year progress toward goals and specific benchmarks established for the program. In the section presenting detailed results, the fourth-year information is presented and organized by goal, and within goals by data-collection method. The section on issues for consideration discusses ways the program can continue to strengthen services.

Overview

Program activities and changes seen from the beginning to the end of the year suggest strong implementation efforts during PEK-ERF's program years. As intended, the program offered extensive professional development and served children at risk of poor academic success. From the beginning to the end of each of the four program years, overall improvements were seen in teachers' early literacy knowledge, their instructional support, and classrooms' supports for language and literacy learning. Classrooms also met a number of the indicators of alignment with the Project for Academic Excellence at the end of each of the program years.

Teachers indicated they were very enthusiastic about the program. In each spring, focus groups were conducted with PEK-ERF teaching staff. Overall, participants in all four years were very positive about their involvement with PEK-ERF, communicating that they had advanced their practice as a result of their participation in the program (Heinrichs, 2007a; Heinrichs, 2008; Heinrichs, 2009; Gruenewald, 2010).

The following list summarizes first- to fourth-year progress toward implementation goals, followed by a figure summarizing the progress toward annual benchmarks associated with those goals. Areas of implementation that can be strengthened or adjusted during the sites' continued participation with PEK are discussed at the end of this section.

- Almost all participants (92% in the first year and 90% in the second year) fell into one or more of the program's three target categories, meaning they were low-income, English Language Learners, or received Special Education services. The number of participants in the target population cannot be accurately reported for the third year due to incomplete data on children's eligibility for free or reduced-price lunch. We

estimated that at least 71 percent of the children in the third year. In the fourth year, 87 percent of the participants were in the target group.

- As intended, the program provided intensive professional development in the form of weekly coaching and monthly training sessions.
- Teaching staff provided positive feedback about the program’s training and coaching through the focus groups and a spring satisfaction survey.
- On average, classrooms showed improvement from the beginning to end of the program year on each of the ELLCO subscales, indicating overall improvement in the extent to which classrooms promoted literacy and language development. ELLCO’s results were higher in the later years than the first year. Most or all classrooms in the second, third, and fourth years met their targets, as compared to none or a few in the first year.
- All classrooms observed during the four years of the program were found to have implemented a majority of the indicators of alignment with the Project for Academic Excellence.
- Spring CLASS PreK observations found that overall, teachers provided strong emotional support and classroom organization. Spring scores were generally in the upper mid to high range, and variability among classrooms was generally relatively low. Spring scores for the instructional support domain in the fourth year were mostly in the mid-range. All classrooms in the fourth year meeting the target for CLASS, higher than the previous three years.

Figure 3 summarizes the program’s progress toward annual implementation benchmarks in each of the four program years. Areas that can be strengthened as the program continues with PEK are summarized at the end of this section under “Issues for consideration.”

3. Progress toward PEK-ERF implementation goals and benchmarks, Year 1 - Year 4

Goals	Benchmarks	Year 1 progress ^a	Year 2 progress ^a	Year 3 progress ^a	Year 4 progress ^a
1. Staff capacity	<ul style="list-style-type: none"> 80% of classroom teachers and assistants who participate in both training and coaching will attend at least 10 days of professional development Increased teachers' knowledge and skills 	<ul style="list-style-type: none"> All 18 teaching staff who participated in training and coaching and who were with the program from the beginning of the year into the summer attended more than 10 days Teachers' responses to a survey assessing early literacy knowledge indicate improvement from baseline 	<ul style="list-style-type: none"> All 21 teaching staff who participated in training and coaching and who were with the program from the beginning of the year into the summer attended 10 days or more A similar pre-post teacher survey is not available 	<ul style="list-style-type: none"> 15 of the 16 teaching staff (94%) who participated in training and coaching and who were with the program from the beginning of the year into the summer attended 10 days or more A similar pre-post teacher survey is not available 	<ul style="list-style-type: none"> 3 of the 18 teaching staff (17%) who participated in training and coaching and who were with the program from the beginning of the year into the summer attended 10 days or more A similar pre-post teacher survey is not available
2. Curriculum and instruction ^b	<ul style="list-style-type: none"> 90% of classrooms will achieve at least a 4 on ELLCO language, literacy, and curriculum subscale 90% of classrooms will achieve an average score of 3.75 or higher on ELLCO general classroom environment subscale 	<ul style="list-style-type: none"> 0/7 classrooms met target; classrooms improved on average from baseline 2/7 classrooms (29%) met ELLCO target; classrooms improved on average from baseline 	<ul style="list-style-type: none"> 8/8 classrooms met target; classrooms improved on average from baseline 8/8 classrooms met ELLCO target; classrooms improved on average from baseline 	<ul style="list-style-type: none"> 8/8 classrooms met target; classrooms improved on average from baseline 6/8 classrooms (75%) met ELLCO target; classrooms improved on average from baseline 	<ul style="list-style-type: none"> 6/6 classrooms (100%) met target; classrooms improved on average from baseline 6/6 classrooms (100%) met ELLCO target; classrooms improved on average from baseline
2. Curriculum and instruction ^b	<ul style="list-style-type: none"> 90% of classrooms will achieve an average score of 5 or higher on CLASS PreK The current curriculum theme will be represented in 7 out of 9 Discovery Centers in all of the classrooms 	<ul style="list-style-type: none"> 5/7 classrooms (71%) attained target for CLASS PreK; spring scores were generally in upper mid-range 7/7 classrooms met target, as observed by literacy coach 	<ul style="list-style-type: none"> 5/7 classrooms (71%) attained target for CLASS PreK; spring scores were generally in mid to upper mid-range 8/8 classrooms met target, as observed by literacy coach 	<ul style="list-style-type: none"> 2/8 classrooms (25%) attained target for CLASS PreK; spring scores were generally in mid to upper mid-range 8/8 classrooms met target, as observed by literacy coach 	<ul style="list-style-type: none"> 6/6 classrooms (100%) attained target for CLASS PreK; spring scores were generally in mid- to high range 6/6 classrooms met target, as observed by assessment coach

3. Progress toward PEK-ERF implementation goals and benchmarks, Year 1 - Year 4 (continued)

Goals	Benchmarks	Year 1 progress^a	Year 2 progress^a	Year 3 progress^a	Year 4 progress^a
3. Classroom environment ^b	<ul style="list-style-type: none"> ▪ 18 out of 20 on ELLCO book subscale ▪ 19 out of 21 on ELLCO writing subscale 	<ul style="list-style-type: none"> ▪ 6/7 classrooms met target; classrooms improved on average from baseline ▪ 3/7 classrooms met target; classrooms improved on average from baseline 	<ul style="list-style-type: none"> ▪ 7/8 classrooms met target; classrooms improved on average from baseline ▪ 8/8 classrooms met target; classrooms improved on average from baseline 	<ul style="list-style-type: none"> ▪ 7/8 classrooms met target; classrooms improved on average from baseline ▪ 6/8 classrooms met target; classrooms improved on average from baseline 	<ul style="list-style-type: none"> ▪ See Goal 2 ▪ See Goal 2
4. PAE alignment	<ul style="list-style-type: none"> ▪ All classrooms and teachers will demonstrate alignment with PAE 	<ul style="list-style-type: none"> ▪ 7/7 classrooms had fully or partially implemented a majority of the indicators of alignment ▪ Variations existed among classrooms, and several indicators did not show a high rate of implementation 	<ul style="list-style-type: none"> ▪ 8/8 classrooms had implemented a majority of the indicators of alignment ▪ Variations existed among classrooms, and several indicators did not show a high rate of implementation 	<ul style="list-style-type: none"> ▪ 8/8 classrooms had implemented a majority of the indicators of alignment ▪ Variations existed among classrooms, and several indicators did not show a high rate of implementation 	<ul style="list-style-type: none"> ▪ 6/6 classrooms had implemented a majority of the indicators of alignment ▪ Variations existed among classrooms, and several indicators did not show a high rate of implementation

^a The initial program year spanned January 8 to July 31, 2007, providing less time to attain annual benchmarks. Year 2 spanned September 1, 2007, to July 31, 2008, and Year 3 spanned September 1, 2008, to July 31, 2009. Year 4 spanned September 1, 2009, to May 31, 2010.

^b For 2009-10, curriculum and instruction (goal 2) and classroom environment (goal 3) are reported together.

Student demographics and attendance

During the fourth year, between September 1, 2009, and May 31, 2010, Saint Paul’s PEK-ERF program served a total of 164 preschool-age children. Ninety-five children were served in two classrooms at the two elementary schools and 69 children in four classrooms at the two child care centers (Figure 4). The elementary school sites offered programming for 4-year-olds and child care center sites for 3- and 4-year-olds.

4. Number of children by location, Year 4

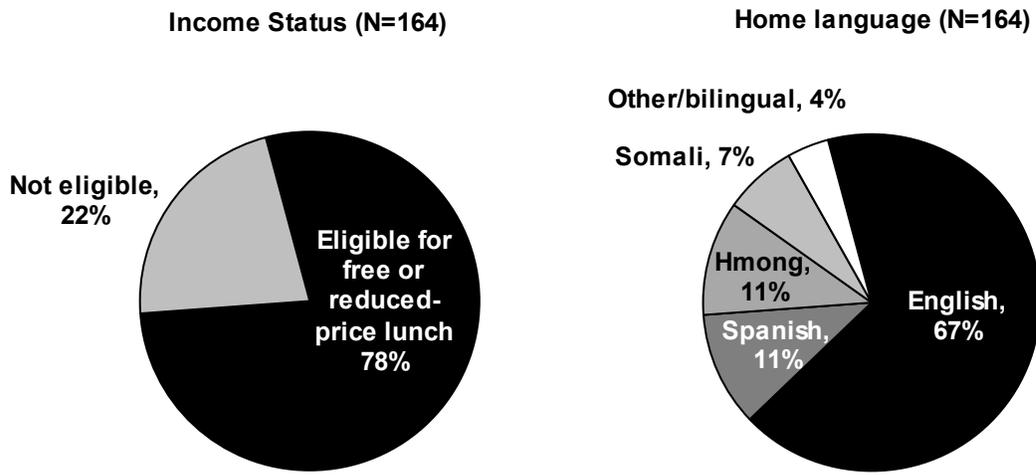
Program site		Number of children
Elementary school sites	Eastern Heights	56
	Highwood Hills	39
	Total	95
Child care centers	Wilder Child Development Center	43
	Bethel University King Family Foundation Child Development Center	26
	Total	69

Note: Year 3 spanned September 1, 2009, to May 31, 2010. Children in elementary school sites were 4-year-olds and in child care centers were 3- and 4-year-olds.

Representation of target populations

As shown in Figure 5, most of the children were low-income, defined here as eligible for free or reduced-price lunch (79% at schools and 77% at child care centers). About 33 percent of the children had a primary home language other than English. While most of the child care children (91%) had English as their primary home language, 50 percent of school children had a primary language other than English (Figure A2). Eight to nine children (8-13%) in each setting received Special Education services (Figure A2). Almost all of the participants (87%) fell into one or more of PEK-ERF’s target categories, meaning they were low-income, English Language Learners, or received Special Education services.

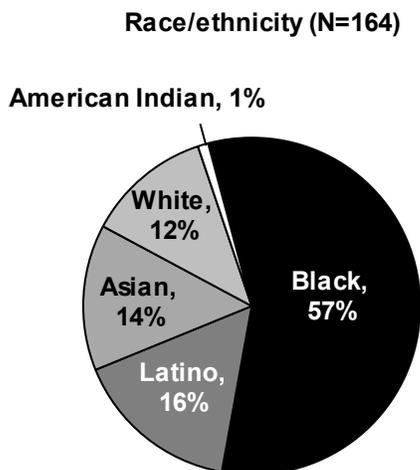
5. Children's income status and home language, Year 4



Race/ethnicity

Almost all students (88%) were students of color (85% at schools and 93% at child care centers). At both the schools and child care centers, the most common racial/ethnic group was Black (44% at schools and 74% at child care centers). Twenty-two percent of the children at schools were Latino, compared to 9 percent at the child care centers. Similarly, 19 percent of the children at schools were Asian, compared to 7 percent at the child care centers. The proportions of White students were low at both settings (15% at schools and 7% at child care centers) (Figures 6 and A2).

6. Children's race/ethnicity, Year 4



Attendance

Between September 1, 2009, and May 31, 2010, the elementary school sites offered 163 days of PEK-ERF programming, and the child care centers offered 182 days at Bethel University King Family Foundation Child Development Center and 185 days at Wilder Child Development Center. Three- and 4-year-olds at child care centers attended a median of 157 and 155 days, respectively. The median number of days attended by 4-year-olds at elementary schools was 136 days. Overall, 46 percent of school children and 64 percent of child care children attended more than 140 days (Figure A3).

Goal 1: Staff capacity

Goal: Improve staff capacity to provide effective literacy instruction, and improve staff qualifications.

Activities

PEK-ERF provided research-based professional development to school and child care teachers in the form of quarterly training sessions in the fourth year (grant-extension year). The program also provided intensive teacher coaching to help teachers translate knowledge and skills gained from professional development into their classroom instruction. Each week, a literacy coach worked individually with classroom teachers and staff to help them incorporate strategies and activities from the training provided.

The coach worked with all six classrooms, conducting coaching sessions one-on-one and with classroom teams. The coach met with each teacher four times a month for three to four hours each time. To build coaching capacity in community child care centers, the PEK-ERF content coach modeled coaching for the child care directors and assistant directors. Co-coaching with child care directors and assistant directors occurred twice monthly with classroom teams. During each session, the coach reviewed a goal-setting form with teachers. The coach also conducted classroom observations using an observation form and provided feedback to teaching staff. Teachers were also videotaped, and the coach met with teachers to discuss positive literacy behaviors and areas of growth identified in this videotaping. The coach also helped teachers incorporate progress-monitoring, reviewing results from child and classroom assessments (i.e., IGDI, TROLL, PALS, ELLCO Pre-K, and CLASS PreK) and exploring ways they could inform instruction and the classroom environment.

Training topics

Training topics during the program's fourth year included the following (Figure A4):

- overview of response to instruction (RTI) and instructional strategies that support young children's literacy development;
- review of language and vocabulary development;
- data-driven interventions and effective instruction (differentiation of instruction);
- overview of Classroom Assessment Scoring System (CLASS Pre-K) components;
- overview of Early Language and Literacy Classroom Observation (ELLCO Pre-K) components;
- integrating sensory play into classroom lessons;
- overview of concept development in children's learning and the use of the ELLCO Pre-K, CLASS Pre-K, and Early Childhood Workshop in assessing children's learning; and
- parent roles in their children's learning.

Progress toward attendance benchmark

Based on its strong emphasis on teacher professional development, PEK-ERF established the annual benchmark that 80 percent of classroom teachers and assistants would participate in at least 10 days of professional development, including attendance at formal training sessions as well as work with the program's coach. In the extension year of the grant, the number of formal training sessions was reduced due to limited funding. Quarterly training sessions were offered to community child care partners. The amount of professional development days attended by teaching staff in 2009-10 varied greatly, ranging from 0 to 13 days, with every six hours of professional development counting as a day. Three of the 18 teaching staff attended 10 or more professional development days, five staff attended between 5 and 9 days, and the remaining 10 staff attended less than 5 days. Additionally, the professional development was extended to the child care center directors and an assistant director. Each of the child care center directors and the assistant director received between four and six days of training and weekly coaching. The PEK-ERF program coordinator indicated that during the final year, the number of formal training sessions offered was reduced, but the program continued to offer coaching sessions based on individual teachers' needs.

Focus group

In June 2010, the Saint Paul Public Schools assessment coach conducted two focus groups with PEK-ERF staff to discuss their experiences with the program over the course of the grant. One group comprised six teaching staff, including three lead teachers and three support staff, and was limited to staff who had been with the program since its initial year of implementation. The other group comprised three administrative child care staff. As in the three preceding years' focus groups, participants provided positive feedback overall about their experiences with the program (Heinrichs, 2007a; Heinrichs, 2008; Heinrichs, 2009; Gruenewald, 2010).

Professional development and coaching

Respondents indicated they highly valued the professional development provided through the program. In addition to trainings, they strongly appreciated opportunities for information-sharing within their own classroom teams as well as with peers from other sites. They also provided favorable feedback about the helpfulness of coaching overall. Examples given included coaches' follow-up on professional development topics, and coaches' support for their successes and attempts at new strategies. Support staff indicated that they, too, would have liked to receive coaching. Several respondents commented that weekly coaching was too frequent.

“Professional development has just been phenomenal, awesome throughout this grant!”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“It was helpful to have bigger trainings ... to meet with teachers who are in the schools. ... Being able to talk to people who are in the schools doing the same thing we are was really great.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“I just appreciated the fact that we had professional development and our coaches would follow up. The tie between those two was very helpful for me as a teacher. This is what we talked about; okay how are you going to apply it in your classroom?”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“Once a week is a little bit too much. Twice a month would work better.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“Maybe if it was a progression, with the newer teachers getting coaching once a week and then more accomplished teachers getting coaching less often.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“Having [her] as our coach was wonderful. She is so knowledgeable on what she is coaching on. ... Teachers are very receptive to her approach.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

Sustainability

At various points during the focus groups, respondents spoke of different program aspects they plan to sustain. Responses indicated that staff had been invested with the knowledge of and appreciation for some key program aspects necessary to continue them. For example, several respondents noted that they plan to continue the Early Childhood Workshop model. They commented that they had the knowledge, resources, or appreciation for the model necessary to sustain it. Some respondents also spoke of plans to continue the *Doors to Discovery* curriculum, student and classroom assessments, or coaching. Some respondents spoke of continuing the full program model. Examples of their comments follow:

“It’s what we do. To change it would be ridiculous. It took us four years to learn it.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“All of it! I can’t even imagine working this hard and not continuing it all.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“‘Watch, wait and listen’ was a new idea for me that I will continue.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“Explicit instruction. It’s something we talked about from the very beginning and I can’t even think of how to teach without it. I used to teach with more just exposure. Some things need to be talked about explicitly. It does need to be a balance.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

Goals 2 and 3: Curriculum and instruction and classroom environment

Goal 2: Improve instructional practices, curricula, and materials at each preschool site to meet the assessed needs of pre-K students.

Goal 3: Improve the classroom environment to ensure an oral language and print-rich environment that is meaningful and culturally and linguistically appropriate.

ELLCO

To assess the extent to which PEK-ERF classrooms promote literacy and language development, the Saint Paul Public Schools assessment coach conducted observations using a research-based tool for preschool classrooms, the Early Language and Literacy Classroom Observation (ELLCO Pre-K). ELLCO Pre-K, being used for first time in 2009-10, is based on the ELLCO Toolkit that was used by the program previously. ELLCO Pre-K consists of 19 items that are organized into five sections: 1) classroom structure, 2) curriculum, 3) the language environment, 4) books and book reading, and 5) print and early writing. The first

two sections combined create the general classroom environment subscale and the last three sections together create the language and literacy subscale.

Each item in the subscales is scored based on a grading rubric ranging from “deficient” (1) to “basic” (3) to “exemplary” (5). Program expectations are that classrooms will be rated at higher than the basic level in both subscales (Heinrichs, 2007b).

In the previous PEK-ERF reports, goals 2 and 3 are reported separately. In 2009-10, the general classroom environment and the language and literacy subscales are used to assess progress toward the curriculum and instruction goal and classroom environment goal.

ELLCO Pre-K observations were conducted in all six PEK-ERF classrooms at the beginning of the program year, and again at the end of the year. Analyses of ELLCO results compare changes among the classrooms from pre- to post-test.

Progress toward general classroom environment benchmark

The general classroom environment subscale includes seven items addressing the organization of the physical environment; the organization and content of classroom materials and displays; classroom management; roles of teachers and staff in facilitating children’s learning; curriculum approaches; opportunities for children’s choice and initiative in their learning; and recognition of the diversity that children bring into the classroom. The PEK-ERF benchmark establishes a target that classrooms will score above the basic level, with an average of 4 or higher. Again, the grading rubric ranges from “deficient” (1) to “basic” (3) to “exemplary” (5) (Smith, Brady & Anastasopoulos, 2008; Heinrichs, 2007b).

All six classrooms were observed in fall and spring, and all of them met the target in the spring, an increase from five classrooms in the fall. On average, classrooms scored almost at the exemplary level in the spring, with an average score of 4.6. This overall average represents an increase from the average of 4.2 at the beginning of the year. Individual classrooms’ spring scores ranged from 4.1 to 5.0. Five classrooms increased their scores from pre-test to post-test, and one classroom with a high score at pre-test (4.6) scored the same at post-test. At post-test, two classrooms achieved the highest score (5.0) (Figures 7 and A5).

Looking at individual indicators within the subscale, classrooms scored the lowest on average on recognizing the diversity in the classroom, with an average of 4.2 (almost “exemplary”) for that indicator. Three classrooms scored a 5.0 for that indicator, two scored a 4.0, and one classroom scored a 2.0. Classrooms scored the highest on the opportunities for child choice and initiative, organization of the classroom, and personnel indicators, with five of the six classrooms scoring 5.0 (“exemplary”) (Figure A6).

Progress toward language and literacy benchmark

The language and literacy subscale includes 12 items addressing classroom climate; opportunities for extended conversations; instructional efforts to expand children's vocabulary and phonological awareness; the organization and use of the book area; the availability of books with varied contents, levels, and characters; the presence and use of books across content areas of the curriculum; the quality and frequency of book reading; the availability of writing materials; opportunities to expand children's awareness of print and purposes of writing; and use of environmental print. Again, the PEK-ERF benchmark establishes a target that classrooms will score above the basic level, with an average of 4.0 or higher on this subscale (Smith, Brady & Anastasopoulos, 2008; Heinrichs, 2007b).

Classrooms improved their overall average from 4.0 to 4.5 on this subscale. Individual classrooms ranged from average scores of 4.2 to 4.8 for this subscale in the spring, exceeding the program's target. Two classrooms increased from scoring below 4.0 to above 4.0 (Figures 7 and A5).

Averages for individual indicators within the subscale were 4.0 or higher in the spring, with the exception of indicators related to phonological awareness (3.8) and support for children's writing (3.7). The average score for the efforts to build vocabulary indicator made a large improvement from below the basic level in the fall (2.2) to almost exemplary level in the spring (4.5) (Figure A6).

7. ELLCO results for subscales pertaining to Goal 2, Year 4 pre – post

Subscale (possible points)	Pre-test	Post-test
General Classroom Environment (5)		
Average	4.2	4.6
Range	3.3-4.6	4.1-5.0
No. of classrooms reaching target ^a	5/6	6/6
Language and Literacy (5)		
Average	4.0	4.5
Range	3.6-4.6	4.2-4.8
No. of classrooms reaching target ^a	4/6	6/6

^a The program established target scores of 4.0 for the General Classroom Environment subscale and Language and Literacy subscale.

Note: During the program's fourth year, baseline ELLCO Pre-K assessments were conducted in October 2009 (pre-test), and follow-up assessments were conducted in April 2010 (post-test). The Saint Paul Public Schools assessment coach conducted the ELLCO Pre-K assessments.

Progress across ELLCO Pre-K benchmarks

Looking at the two ELLCO Pre-K subscales, classrooms generally improved from their initial scores at the beginning of the program year. All six classrooms assessed in the spring met targets for both subscales (Figure 7).

Classroom Assessment Scoring System PreK (CLASS PreK)

To assess classrooms' instructional quality, videotapes were taken of PEK-ERF classrooms in October-November 2009 and April-May 2010 and analyzed by the SPPS Pre-Kindergarten assessment coach. Single videotaped observations of individual classrooms were assumed to represent typical interactions in that classroom. Videotapes were analyzed using CLASS PreK, a tool for assessing the quality of teacher-student interactions in preschool classrooms. CLASS PreK is used to examine classrooms based on interactions between all adults and all students in the classroom, providing a picture of a typical student experience in the room rather than assessing the experiences of individual children and with individual adults (Justice, June 2007).

In 2009-10, the program used a new version of CLASS Pre-K (Pianta, La Paro, & Hamre, 2008). CLASS PreK encompasses 10 subscales that are organized into three domains: emotional support, classroom organization, and instructional support. Subscales include the following: positive climate, negative climate, teacher sensitivity, and regard for student perspectives (emotional support domain); behavior management, productivity, and instructional learning formats (classroom organization domain); and concept development, quality of feedback, and language modeling (instructional support domain) (Pianta, La Paro, & Hamre, 2008). Subscales are scored on a 7-point scale, ranging from “not at all characteristic of a classroom” (1) to “highly characteristic of a classroom” (7). Scores of 1-2 are generally considered low-range, 3-5 mid-range, and 6-7 high range. The negative climate scale is an exception to this scoring system. Scores for this scale are reversed, with 1 representing “highly characteristic of a classroom” and 7 representing “not at all characteristic of a classroom.”

University of Virginia researchers addressed the validity of CLASS PreK as an observational tool:

The CLASS instrument has been widely used in large-scale studies of preschool classrooms across the United States. Such studies show that preschool classrooms typically are rated highly on measures of emotional support, and are related lower on measures related to instructional support. Importantly, scores on all dimensions of the CLASS are predictive of children's short- and long-term academic and social success, and thus represent an important area to address within professional development.
—(Justice, June 2007)

Progress from pre- to post-test

Analyses of CLASS PreK results compare changes among classrooms observed at both pre- and post-test. Pre- and post-test data are available on all six classrooms. Figure 8 shows fall 2009 and spring 2010 results. Spring observations indicate that overall, classrooms provided strong emotional support and classroom organization. In these domains, spring scores were generally in the upper mid-range to high range, and variability among classrooms was generally relatively low (Figures A7 and A8). The average spring scores in the instructional support domain were mostly in the mid-range.

8. CLASS PreK means by subscale, Year 4 pre – post

Subscale	Mean score at pre-test	Mean score at post-test ^a
Emotional support		
Positive Climate	5.8	6.7
Negative Climate ^a	6.8	7.0
Teacher Sensitivity	5.0	5.7
Regard for Student Perspectives	4.5	5.2
Classroom organization		
Behavior Management	6.3	6.7
Productivity	6.5	6.7
Instructional Learning Formats	5.2	5.5
Instructional support		
Concept Development	4.0	4.3
Quality of Feedback	4.5	5.2
Language Modeling	4.8	5.3

^a To be consistent with the other items, the negative climate score is recoded as 1=high and 7=low. A higher score means a less negative climate.

Note: During the program's fourth year, CLASS PreK assessments were completed by the SPPS Pre-Kindergarten assessment coach based on classroom videotapes taken in October-November 2009 (pre-test) and April-May 2010 (post-test).

For emotional support, mean scores for the positive and negative climate subscales were in the high range in the spring, meaning classrooms generally displayed characteristics of a positive climate. Teacher sensitivity and regard for student perspectives subscales showed the lowest mean scores in the spring (5.7 and 5.2, respectively), although they were still in the upper mid-range category. Researchers also found that the average scores on all four items in this domain improved from fall to spring (Figure 8).

Spring 2010 observations found that classrooms had strong behavior management and productivity. The mean scores for these subscales were in the high range (6.7). The average score for the instructional learning formats subscale was in the upper mid-range category (5.5). All items in this domain improved slightly from fall to spring (Figure 8).

In the area of instructional support, results on the concept development subscale showed the lowest average scores, with average scores in the low mid-range in both fall and spring observations (4.0 and 4.3, respectively). The mean scores for the quality of feedback and language modeling subscales in the spring were in the upper mid-range (5.2 and 5.3, respectively), showing a large increase from the fall observations (4.5 and 4.8, respectively) (Figure 8).

Progress toward program benchmarks

PEK-ERF established a program target for 90 percent of classroom teachers to achieve an average CLASS PreK score of 5 or higher. As shown in Figure A8, all six classrooms (100%) assessed in the spring attained the target.

Focus group

All focus group respondents indicated they appreciated the *Doors to Discovery* curriculum as a good base for instruction, especially at the beginning of the project. However, they felt it was important to have flexibility to supplement the curriculum as needed, citing science and math as areas where they perceived the curriculum as weaker. Child care sites also felt it was beneficial to separate units over a couple of years, and supplement with their own, so children attending the site for multiple years did not repeat the same units.

“The curriculum provides a nice base to work from. I will use it, for sure, but add in other materials.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“The curriculum was important for us to have when we started. ... It was easy to just jump right in with it.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“With some of the teachers that have been using *Doors* for several years, they are now at the point where they can pick some different things, but they are still staying with that model.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

Doors to Discovery Centers fidelity check

As another way to improve curriculum and instruction, PEK-ERF established a benchmark that literacy props, activities, or materials reflect the area of study in seven out of nine Discovery Centers in all of the classrooms. Discovery Centers are learning centers that children use during the Early Childhood Workshop's active learning time. They may include block, writing, dramatic play, reading, math, science, sensory, computer, or art centers. In the spring, the literacy coach observed that the target was met in all six classrooms.

Goal 4: PAE alignment

Goal: Increase standardization of practices and environments and improve student transition to kindergarten through alignment with Saint Paul's school-based reform model, the Project for Academic Excellence.

PAE observation

Working with the program's evaluator from Saint Paul Public Schools, PEK and PEK-ERF staff developed an observational tool to assess classrooms' alignment with Project for Academic Excellence principles. The tool delineates expectations for alignment based on the content of professional development and coaching provided during the program's fourth year. The tool has been modified over time based on increasing levels of implementation and experience working with the tool. Observations were conducted by the assessment coach from Saint Paul Public Schools, and teachers were notified of when observations would take place. In March 2010, all six PEK-ERF school classrooms were observed based on the assessment tool. The version of the tool used in 2010 included a checklist of items associated with 21 indicators of alignment with the Project for Academic Excellence (Figure A9). These indicators relate to the Early Childhood Workshop model, routines and rituals, and classroom environment and expectations. On each item in the checklist, the observer indicated "yes," "partial," or "no," indicating that the item was fully implemented, partially implemented, or not implemented.

Results suggest that overall, the program has achieved relatively high levels of alignment with the Project for Academic Excellence.

Early Childhood Workshop model

Based on spring 2010 observations, PEK-ERF classrooms achieved a high rate of implementation of the Early Childhood Workshop model. For each of the following areas related to portions of the day, five to six classrooms were found to have fully or partially implemented all of the indicators in the area: ease into the day, morning/afternoon

meeting, small group, and active learning. During these times, teachers provided opportunities for children to “talk, read, and write.” The remaining Early Childhood Workshop indicators that addressed the regroup to revisit portion were met by two to four classrooms. All classrooms fully implemented the morning/afternoon meeting indicators.

Classroom rituals and routines

PEK classrooms also showed a high rate of implementation for the indicators related to classroom rituals and routines, although in some areas there was room for moving beyond basic expectations. Indicators with a high rate of implementation for each of the checklist items (i.e., at least five of six classrooms meeting each item) included the use of sign-in, incorporation of a read aloud, and use of transition time. All six classrooms also met the basic expectation of use of daily messages, but the evidence of teachers and children reading messages together was lacking in three of the six classrooms. Half of the classrooms were observed for their use of interactive writing, and most of the classrooms observed met the expectations. Indicators for independent reading were met by one-third of the classrooms. All six classrooms showed evidence of shared reading around the room, but there was no evidence of explicit teaching of a specific standard or concepts about print.

Classroom environment and expectations

Classrooms also met a number of indicators related to classroom environment. Indicators with a high rate of implementation included evidence of the area of study that is embedded in the day’s activities; displays of children’s original work, children’s names, and accountable talk bubbles; displays and use of a visual schedule and core content standards; evidence of clear classroom expectations; and development and use of a detailed lesson plan. All six classrooms also had a word wall, but the word wall was not always referred to by the teachers.

Progress toward program benchmark

PEK-ERF established the benchmark that all classrooms and teachers would demonstrate alignment with the Project for Academic Excellence. While variations existed among classrooms, spring 2010 observations found that overall, teachers were implementing a number of the components of the Early Childhood Workshop model and introducing its routines and rituals into their daily practice. All six classrooms were found to have fully or partially implemented most of the indicators of alignment with the Project for Academic Excellence. The Saint Paul Public Schools’ assessment coach report indicated that individual classrooms had fully or partially implemented 80 to 95 percent of the PAE indicators (Figure A9).

Focus group

Asked about the impact of implementing the Early Childhood Workshop in the classroom, all of the focus group respondents provided favorable feedback. They credited the routines with helping build structure and support for kids, and with promoting kids' skills and confidence. Participants from child care sites also indicated that implementing the Early Childhood Workshop required substantial reorganization of the day's routines.

“It gave us more of a focus and more of a structure. ... We used to be doing some of the things, but not in such a structured way and, therefore, we weren't getting the same kind of results.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“The kids write more, they look at books more. The impact for us is the older kids are reading when they go to kindergarten. They are reading. They know sight words; they are ready to go.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“We probably spent more time in large group than we did in small group activities. Even in the environmental set-up, we really had to restructure everything.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

Child care staff also provided positive feedback about their overall experience collaborating with Saint Paul Public Schools, describing the program as a team effort with the school district. In the words of one respondent,

“I think for me, in the position I am in now, it was nice to know that we are in-line with what is going on in the schools. ... We always wanted to be, but nobody really knew what that meant.”

— June 2010 focus group participant (as quoted in Gruenewald, 2010)

Use of child and classroom assessments

Focus group

Focus group respondents unanimously indicated that assessing students helped them understand individual students' needs and progress. They felt they were able to develop effective groups for small-group instruction based on this knowledge. Opinions differed, however, about the ideal frequency of testing. Several indicated that monthly IGDI testing was too much, while a couple others either said the monthly testing was helpful for kids who were struggling or commented that testing needed to occur more often than three times a year.

“The IGDIs, the PALs, and the TROLLs really helped focus in on the skills the kids really need. So, it helped target; it changed what we did in the classroom.”
— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“At times it felt like all we were doing was assessing, and we never had time to teach the skills.”
— June 2010 focus group participant (as quoted in Gruenewald, 2010)

“It keeps teachers accountable as well. If they are looking at the kid’s score and they are not where they want them to be, they can look and say, ‘Okay, what do I need to do?’ Without that, you don’t see and you don’t know where you need to go back to ... and you would be just going off of a whim. This makes it very concrete.”
— June 2010 focus group participant (as quoted in Gruenewald, 2010)

Issues for consideration

PEK-ERF showed strong implementation efforts. Implementation is an ongoing process, and the program gathered valuable information on ways to continue strengthening implementation through several feedback mechanisms throughout the four years of PEK-ERF. As the schools and child care centers continue to participate in the PEK program, the following evaluation insights can be considered in relation to the experiences of PEK-ERF program staff and teachers. It should be noted that program leaders and staff may have already made adjustments in some of these areas.

- *Coaching.* Based on feedback from the spring focus group, the program may want to offer coaching to support staff. The program may also want to offer fewer coaching sessions based on teachers’ schedules and needs. To target coaching to individual classrooms’ needs, the program can use the classroom-level results from the ELLCO Pre-K, CLASS, and observations of alignment with the Project for Academic Excellence.
- *Classroom instruction.* In working toward CLASS and ELLCO targets, the program may want to focus on improving results in the areas of concept development (CLASS’s instructional support subscale), phonological awareness (ELLCO’s language and literacy subscale), and support for children’s writing (ELLCO’s books and book reading).
- *Curriculum support.* Based on teachers’ feedback in the spring focus group, program staff can continue supporting curriculum implementation in the following ways:
 - Providing support and resources to teachers who may need support in implementing a math or science curriculum.
 - Working with child care teachers who want to add or rotate lesson units.

- Continuing to provide support to teaching staff in program areas they would like to sustain.
- *Alignment with the Project for Academic Excellence.* To continue strengthening alignment with the Project for Academic Excellence, future coaching can address the following indicators not showing a high rate of implementation across classrooms:
 - Incorporating independent reading;
 - Implementing explicit teaching of a specific standard or concepts about print during shared reading; and
 - Increasing the use of a word wall.
- *Student assessments.* While focus group teachers felt that student assessment results were valuable in helping them develop effective groups for small-group instruction, they differed in their opinions about the ideal frequency of testing. Program staff may want to figure out a way to help teachers better incorporate assessments into their lesson plan, rather than viewing assessments as a separate activity.
- *Collaboration with community child care.* In the focus groups, child care staff provided positive feedback about their overall experience collaborating with Saint Paul Public Schools, describing the program as a team effort with the school district. The PEK-ERF program manager and staff should be commended for their collaboration efforts with community child care centers. The positive feelings among child care centers are indicative of their willingness to continue collaborating with Saint Paul Public Schools in its PEK program.

Outcomes results

This section assesses fourth-year progress toward the program's outcomes goals. As in the section on implementation results, this section begins with an overview summarizing first- to fourth-year progress toward goals and specific benchmarks, followed by a presentation of detailed fourth-year results organized by goal and within goals by data-collection method, and concluding with issues for consideration.

Overview

Assessments conducted during the program's first to fourth years show academic progress among participants, including improvements in their early literacy skills and alphabet knowledge. Results for the Peabody Picture Vocabulary Test (PPVT) suggest children experienced accelerated progress in their English receptive vocabulary. TROLL results suggest that on average, participants made faster progress while in the program than their peers in a national sample. Children also showed progress on IGDI and PALS assessments, although it is difficult to know at this point how progress corresponds to that which would be expected based on typical growth and development.

The following list summarizes first- to fourth-year progress toward overall outcomes goals, followed by a table summarizing the progress toward annual benchmarks. Areas that can be strengthened are discussed at the end of this section.

- On average, both 3- and 4-year-olds in all four years improved in all three IGDI areas of picture naming, rhyming, and alliteration, with the highest overall improvement in picture naming and the lowest in alliteration.
- Based on teachers' TROLL assessments, children improved on average in alphabet knowledge and all three subscales, including oral language, reading, and writing. The most improvement was seen in alphabet knowledge and reading in some years. Overall, 67 percent of the children in the first year, 76 percent in the second-year, 70 percent in the third year, and 62 percent in the fourth year scored at or above the 50th percentile at post-test based on a norming sample of children with similar socioeconomic status. Results across the years suggest that on average, children made faster progress while in the program than their peers in a national sample.
- On average, children in all four years showed improvement in both alphabet knowledge and print and word awareness based on PALS assessments, with the largest gains in alphabet knowledge.

- PALS provides spring developmental ranges for 4-year-olds. At the end of the first program year, PEK-ERF 4-year-olds were in the middle of the developmental range for both uppercase alphabet knowledge and print and word awareness. At the end of second, third, and fourth program years, PEK-ERF 4-year-olds were above the developmental range for uppercase alphabet knowledge and in the middle of developmental range for print and word awareness.
- PPVT results from the first- to the fourth-program year indicate that 4-year-olds in both school and child care settings made faster progress than their peers nationally in English receptive vocabulary.
- Generally, there were more children meeting targets in the second and third years, compared to the first and fourth years. It is important, however, to note that PEK-ERF benchmarks are for a full-year of programming, and the first-year results reflect children's progress from January through July 2007 and the fourth-year from September through May. The second- and third-year results reflect the full year of programming, from September 2007 and 2008 through July 2008 and 2009, respectively.

Figure 9 summarizes the program's progress toward annual outcomes benchmarks during the first- to fourth-program years. Areas that can be strengthened as the sites continue working with the PEK program are summarized at the end of this section under "Issues for consideration."

9. Progress toward PEK-ERF outcomes goals and benchmarks, Year 1 - Year 4

Goals	Benchmarks	Year 1 progress^a	Year 2 progress^a	Year 3 progress^a	Year 4 progress^a
5. Student achievement ^b	<ul style="list-style-type: none"> 60% of 4-year-olds will attain target scores or better on each of the three IGDI tests^c 	<ul style="list-style-type: none"> 48-52% of all 4-year-olds attained target scores for individual tests; results show overall improvement from baseline At child care centers, 60% of 4-year-olds attained target score for picture naming, 60% for rhyming, and 50% for alliteration At elementary school sites, 47% attained target for picture naming, 40% for rhyming, and 50% for alliteration 	<ul style="list-style-type: none"> 59-70% of all 4-year-olds attained target scores for individual tests; results show overall improvement from baseline At child care centers, 76% of 4-year-olds attained target score for picture naming, 76% for rhyming, and 56% for alliteration At elementary school sites, 67% attained target for picture naming, 67% for rhyming, and 62% for alliteration 	<ul style="list-style-type: none"> 63-82% of all 4-year-olds attained target scores for individual tests; results show overall improvement from baseline At child care centers, 57% of 4-year-olds attained target score for picture naming, 68% for rhyming, and 45% for alliteration At elementary school sites, 79% attained target for picture naming, 89% for rhyming, and 74% for alliteration 	<ul style="list-style-type: none"> 37-50% of all 4-year-olds attained target scores for individual tests; results show overall improvement from baseline At child care centers, 52% of 4-year-olds attained target score for picture naming, 52% for rhyming, and 39% for alliteration At elementary school sites, 49% attained target for picture naming, 46% for rhyming, and 36% for alliteration
	<ul style="list-style-type: none"> 75% of 4-year-olds will score at the 50th percentile or above on TROLL based on norming sample 	<ul style="list-style-type: none"> 78% scored at or above 50th percentile 	<ul style="list-style-type: none"> 84% scored at or above 50th percentile 	<ul style="list-style-type: none"> 76% scored at or above 50th percentile 	<ul style="list-style-type: none"> 60% scored at or above 50th percentile
	<ul style="list-style-type: none"> 90% of 4-year-olds will identify at least 14 of the 26 letters (PALS) 	<ul style="list-style-type: none"> 81% identified at least 14 letters Results show overall improvement from baseline 	<ul style="list-style-type: none"> 89% identified at least 14 letters Results show overall improvement from baseline 	<ul style="list-style-type: none"> 93% identified at least 14 letters Results show overall improvement from baseline 	<ul style="list-style-type: none"> 81% identified at least 14 letters Results show overall improvement from baseline

9. Progress toward PEK-ERF outcomes goals and benchmarks, Year 1 - Year 4 (continued)

Goals	Benchmarks	Year 1 progress^a	Year 2 progress^a	Year 3 progress^a	Year 4 progress^a
5. Student achievement ^b (continued)	<ul style="list-style-type: none"> 90% of 4-year-olds will correctly identify 7 out of 10 possible items in the print and word awareness task (PALS) 	<ul style="list-style-type: none"> 77% of 4-year-olds identified at least 7 items Results show overall improvement from baseline 	<ul style="list-style-type: none"> 92% of 4-year-olds identified at least 7 items Results show overall improvement from baseline 	<ul style="list-style-type: none"> 90% of 4-year-olds identified at least 7 items Results show overall improvement from baseline 	<ul style="list-style-type: none"> 67% of 4-year-olds identified at least 7 items Results show overall improvement from baseline
	<ul style="list-style-type: none"> 4-year-olds gain 4 standard score points or more on PPVT^d 	<ul style="list-style-type: none"> 59% attained target Overall, children showed accelerated progress compared to peers based on national norms 	<ul style="list-style-type: none"> 49% attained target Overall, children showed accelerated progress compared to peers based on national norms 	<ul style="list-style-type: none"> 65% attained target Overall, children showed accelerated progress compared to peers based on national norms 	<ul style="list-style-type: none"> 51% attained target Overall, children showed accelerated progress compared to peers based on national norms
6. Parent capacity	<ul style="list-style-type: none"> All parents will have at least 75% of responses scored at acceptable level or higher on Family Learning Strategies Survey 	<ul style="list-style-type: none"> At post-test, 53% of parents had at least 75% of responses at acceptable level or higher. Results should be viewed with caution due to relatively low response rate 	<ul style="list-style-type: none"> At post-test, 85% of parents had at least 75% of responses at acceptable level or higher. Results should be viewed with caution due to relatively low response rate 	<ul style="list-style-type: none"> At post-test, 71% of parents had at least 75% of responses at acceptable level or higher 	<ul style="list-style-type: none"> At post-test, 76% of parents had at least 75% of responses at acceptable level or higher
	<ul style="list-style-type: none"> 90% of parents will attend a school-sponsored event 	<ul style="list-style-type: none"> Progress toward this benchmark was not tracked during the initial year because the program was not yet operational in the fall 	<ul style="list-style-type: none"> All parents attended at least one school activity 	<ul style="list-style-type: none"> 98 percent of parents attended at least one school activity 	<ul style="list-style-type: none"> All parents attended at least one school activity

Note: Work Sampling System results were presented by the Saint Paul Public Schools' program evaluator to the PEK-ERF staff in June 2010 and are not included in this report.

^a The initial program year spanned January 8 to July 31, 2007, providing less time to attain annual benchmarks. The second year spanned September 1, 2007, to July 31, 2008, and the third year spanned September 1, 2008, to July 31, 2009. The fourth year spanned September 1, 2009, to May 31, 2010.

^b For student achievement benchmarks, this table focuses on 4-year-olds' attainment of program targets. In cases where separate targets were established for 3-year-olds, their attainment of targets is discussed in the body of the report.

^c Targets were based on scores attained by children entering kindergarten in Minneapolis schools.

^d There is no specific target in terms of the percentage of children gaining 4 points from pretest to posttest in PPVT.

Goal 5: Student achievement

Goal: Increase the early readiness skills of students and ensure that all students learn the language, cognitive, and early reading skills they need to succeed in kindergarten and beyond, including the specific reading skills of oral language, phonological awareness, print awareness, and alphabet knowledge.

Individual Growth and Development Indicators (IGDIs)

Individual Growth and Development Indicators (IGDIs) enable teachers to monitor individual children's early language and literacy development over time. Preschool IGDIs measure children's progress in three areas: picture naming, alliteration, and rhyming. To conduct the assessments, teachers hold up cards with color pictures. During picture naming, children are presented with pictures of objects (e.g., a book, glue, a cake, a rabbit). Children are told to name the pictures as quickly as possible, and their score reflects the number identified correctly in one minute. During rhyming, children are presented with a series of cards each showing four pictures. At the top of the card is a picture depicting the stimulus word (e.g., bees), followed underneath by a row of three other pictures (e.g., a house, pants, and cheese). The teacher points to and says the name of each picture, and tells the child to point to the picture that rhymes with or sounds the same as the stimulus. The child's score reflects the number of correctly identified rhymes in two minutes. Alliteration also uses cards with a stimulus picture at the top followed by three pictures underneath. Children are asked to find the picture that starts with the same sound as the stimulus picture, and their score reflects the number of correct responses in two minutes. IGDIs provide teachers with feedback on individual children's progress over time toward developmental outcomes, and alert teachers when additional interventions may be needed (ECRIMGD, 1998; Get It! Got It! Go! website, n.d.).

Progress from pre- to post-test

During PEK-ERF's fourth year, teachers administered IGDIs in October, January, March, and May. Figure 10 presents results for 114 3- and 4-year-old children for whom assessments were completed in both October 2009 and May 2010 (70% of all children). On average, both 3- and 4-year-olds improved in all three IGDI areas from pre-test to post-test. Both groups experienced the highest overall improvement in picture naming and the least improvement in alliteration on average.

10. IGDI scores, Year 4 pre – post

IGDI area	Average score		Difference
	Pre-test	Post-test	
Age 3 (N=25-26)			
Picture Naming	13.9	23.4	+9.5
Rhyming	2.5	9.2	+6.7
Alliteration	2.2	6.4	+4.2
Age 4 (N=87-88)			
Picture Naming	17.2	23.7	+6.5
Rhyming	4.3	10.0	+5.7
Alliteration	2.1	6.0	+3.9

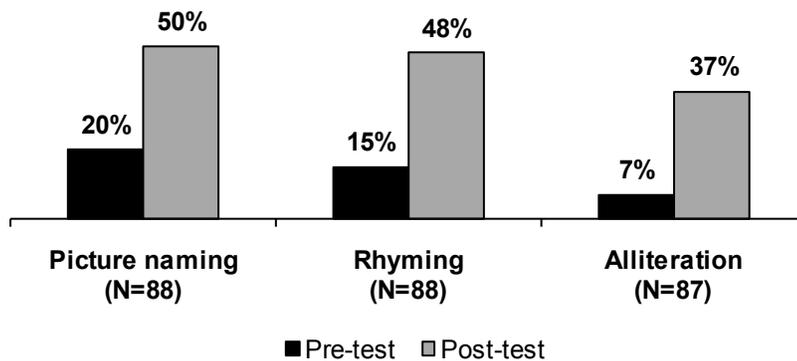
Note: During the program's fourth year, teachers administered IGDI's in October, January, and May. This figure presents results for children administered IGDI's in both October 2009 (pre-test) and May 2010 (post-test).

Evaluators also looked for relationships between the number of days 3- and 4-year-olds attended in each setting (i.e., the “dosage”) and changes in their IGDI scores. Results showed no significant relationship (i.e., correlation) between the number of days attended and changes in IGDI scores.

Progress toward program benchmarks

PEK-ERF established target scores for each of the three IGDI areas. Program benchmarks strived for 60 percent of the children to reach the target for each test. Targets for 4-year-olds were 26 for picture naming, 12 for rhyming, and 8 for alliteration, and for 3-year-olds were 18 for picture naming, 7 for rhyming, and 5 for alliteration. Four-year-old targets were based on scores attained by children entering kindergarten in Minneapolis schools. Three-year-old targets reflected the 50th percentile for children under the age of 48 months who were assessed as part of a Minnesota Early Literacy Training Project. Figure 11 shows the percentage of 4-year-olds attaining the target score or better in each of the three areas at the beginning and end of the program year. It is not known how much children would have been expected to progress during this time in the absence of participation in PEK-ERF.

11. Percent of 4-year-olds meeting IGDI target scores, Year 4 pre – post



Note: During the program's fourth year, teachers administered IGDI in October, January, March, and May. This figure presents results for children administered IGDI in both October 2009 (pre-test) and May 2010 (post-test). It is not known how much children would have been expected to progress in the absence of PEK-ERF.

In October, 20 percent of 4-year-olds met the picture naming target, 15 percent the rhyming target, and 7 percent the alliteration target. In May, 50 percent met the picture naming target, 48 percent the rhyming target, and 37 percent the alliteration target. In other words, between 30 and 33 percent more 4-year-olds met the targets in May than in October (Figures 11 and A10). Three-year-olds in child care centers also showed progress, with between 44 and 54 percent more 3-year-olds meeting targets in May than in October. In October, 32 percent of the 3-year-olds met the picture naming target, 15 percent met the rhyming target, and 23 percent the alliteration target. In May, 76 percent met the picture naming target, 69 percent the rhyming target, and 73 percent the alliteration target (Figure A10).

Results in Figure A10 show that during the fourth program year, PEK-ERF partially met the goal of having at least 60 percent of the children reaching target scores in all three IGDI areas. Three-year-olds in child care centers exceeded the target scores in all IGDI areas, but 4-year-olds in both child care centers and schools did not meet the target scores in any of the IGDI areas.

Teacher Rating of Oral Language and Literacy (TROLL)

The Teacher Rating of Oral Language and Literacy (TROLL) is a research-based observational assessment tool designed to help teachers monitor children's language and literacy development. Teachers can complete the assessment in about 5 to 10 minutes per child, and without interrupting regular classroom activities. Teachers rate children on items in three subscales: oral language, reading, and writing (Dickinson et al., 2001). In addition to reporting on these three subscales, PEK-ERF also reported separately on one question asking how many letters the child recognized. During the program's fourth

year, PEK-ERF teachers conducted baseline TROLL assessments in October 2009, and conducted follow-up assessments in April 2010.

Progress from pre- to post-test

Teachers completed both baseline and follow-up assessments for 115 children (70% of all children). As shown in Figure 12, on average children improved on all three subscales and the question addressing alphabet knowledge. Looking at total scores, which combine scores for the three subscales, 3-year-olds improved 8.4 total score points on average and 4-year-olds improved 16.1 total score points on average out of a possible score of 98. On average, 3- and 4-year-olds improved the most in alphabet knowledge.

12. TROLL average scores, Year 4 pre – post

Subscale (highest possible score)	Average score		Difference
	Pre-test	Post-test	
Age 3 (N=26)			
Oral language (32)	20.8	24.6	+3.8
Reading (42)	25.3	27.2	+1.9
Writing (24)	9.6	12.2	+2.6
Alphabet knowledge	7.9	15.1	+7.2
Total score (98) ^a	55.6	64.0	+8.4
Age 4 (N=89)			
Oral language (32)	19.7	23.7	+4.0
Reading (42)	23.7	29.9	+6.2
Writing (24)	11.1	16.9	+5.8
Alphabet knowledge	11.2	19.8	+8.6
Total score (98) ^a	54.5	70.6	+16.1

^a Total scores combine oral language, reading, and writing scores, and can range from a minimum of 24 to 98 total possible points (Dickinson et al., 2001).

Note: Teachers completed the TROLL for individual students. During the program's fourth year, teachers conducted baseline TROLL assessments in October 2009 (pre-test), and follow-up assessments in April 2010 (post-test).

A TROLL technical report places total scores in the context of percentiles based on a norming sample of low-income, high-risk children (Dickinson et al., 2001).¹ Corresponding percentiles (i.e., 10th, 25th, 50th, 75th, and 90th percentiles) are provided for separate ages and for the fall and spring of the year. At pre-test, 3-year-olds' average score of 55.6 was between the 50th percentile score (51) and 75th percentile (61) for the

¹ The technical report notes norms are "provisional" based on the sample, although especially useful for comparisons with low-income children (Dickinson et al., 2001, 3-4).

fall. At post-test, 3-year-olds' average score of 64.0 was above the 75th percentile (62) for the spring. Looking at 4-year-olds, at pre-test their average score of 54.5 was slightly above the 25th percentile (52) for the fall. At post-test, 4-year-olds' average score of 70.6 was between the 50th percentile score (66) and 75th percentile (74) for the spring. These results suggest that on average, PEK-ERF participants made faster progress while in the program than their peers (Figure 13).

13. PEK-ERF total TROLL scores compared to TROLL norming sample, Year 4 pre – post

	PEK-ERF Average TROLL scores ^a		Norming sample TROLL scores ^b		
	Fall	Spring	Fall	Spring	Percentiles
3-year-olds	55.6	64.0	40	44	10 th percentile
			44	49	25 th percentile
			51	56	50 th percentile
			61	62	75 th percentile
			68	69	90 th percentile
4-year-olds	54.5	70.6	43	46	10 th percentile
			52	55	25 th percentile
			61	66	50 th percentile
			71	74	75 th percentile
			80	84	90 th percentile

^a N=26 for 3-year-olds and N=89 for 4-year-olds.

^b For 3-year-olds, N=115 in the fall and N=55 in the spring. For 4-year-olds, N=336 in the fall and N=234 for in the spring. TROLL raw total scores were converted to percentiles to provide total TROLL scores that correspond to particular percentiles based on a norming sample of low-income, high-risk children. The TROLL technical report providing the scores and percentiles notes that norms are “provisional” based on the sample (Dickinson et al., 2001, 3-4).

Note: Teachers completed the TROLL for individual students. During the program’s fourth year, teachers conducted baseline TROLL assessments in October 2009 (pre-test), and follow-up assessments in April 2010 (post-test).

Researchers also examined relationships between improvements in TROLL scores and the number of days attended by children in each age group in each setting. Results indicated there was no significant relationship (i.e., correlation) between the number of days attended and gains in children’s overall TROLL score.

Progress toward program benchmarks

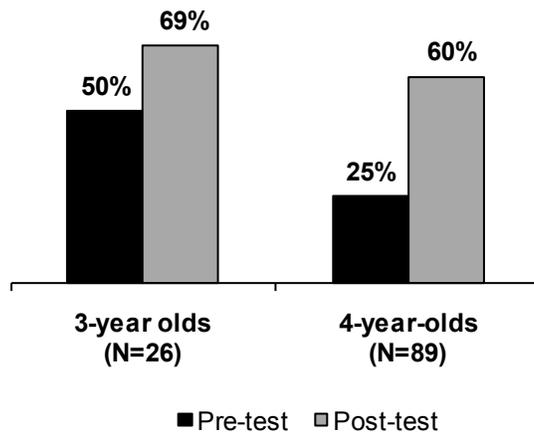
As with other assessments, PEK-ERF established benchmarks for TROLL results. The program’s annual target was for 75 percent of the children to obtain a TROLL total score

(i.e., across the three subscales) that was at the 50th percentile or above based on the assessment’s norming sample of low-income, high-risk children. In this case, scores at the 50th percentile indicated children were making average progress for their age compared to peers of similar socioeconomic status. The 50th percentile for 3-year-olds in the spring is 56 and for 4-year-olds in the spring is 66 (Dickinson et al., 2001). To facilitate comparisons, this section examines pre- to post-test changes in attainment of the *spring* 50th percentiles that are targeted by the benchmark.

Figure 14 shows the percentages of 3- and 4-year-old children meeting program targets for the assessment at baseline and follow-up. At baseline, 50 percent of the 3-year-olds and 25 percent of the 4-year-olds scored at or above the 50th percentile for the spring of their year. At follow-up, 69 percent of the 3-year-olds and 60 percent of the 4-year-olds scored at or above the spring 50th percentile. That is, 19 percent more 3-year-olds and 35 percent more 4-year-olds scored at or above the 50th percentile at post-test than at pre-test. Looking at differences between the settings, more 4-year-olds at the schools than the centers made improvement from below the 50th percentile at pre-test to at or above the 50th percentile at post-test (Figure A11).

Overall, 62 percent of the 3- and 4-year-olds scored at or above the 50th percentile in the spring. The annual target was not attained in 2009-10 (Figure A11).

14. Percent of children meeting TROLL target scores, Year 4 pre – post



Note: Teachers completed the TROLL for individual students. For each age group, both fall and spring scores were compared to the spring 50th percentiles based on a norming sample of low-income, high-risk children (Dickinson et al., 2001). During the program’s fourth year, teachers conducted baseline TROLL assessments in October 2009 (pre-test), and follow-up assessments in April 2010 (post-test).

Phonological Awareness Literacy Screening (PALS)

PEK-ERF teachers used Phonological Awareness Literacy Screening (PALS) to assess children's knowledge of the alphabet and their awareness of print concepts. In the alphabet knowledge subtest, teachers asked children to name the 26 upper-case letters presented in random order.² In the print and word awareness subtest, teachers read a familiar nursery rhyme printed in a book and asked each child to point to different components in the book (e.g., pictures, letters, and words). PALS also includes name writing, beginning sound awareness, rhyme awareness, and nursery rhyme awareness tasks, but those were not used in the PEK-ERF program (PALS, n.d.).

Progress from pre- to post-test

PALS baseline assessments were conducted in October 2009, and end-of-year assessments were conducted in May 2010. Both pre- and post-tests were completed for 113 children (69% of all children). On average, both 3- and 4-year-old PEK-ERF children showed improvement in both alphabet knowledge and print and word awareness from baseline to follow-up. Both age groups showed the largest gains in alphabet knowledge. On average, 3-year-olds improved by 8.2 points and 4-year-olds by 9.3 points out of a possible 26 points for alphabet knowledge. In the area of print and word awareness, 3-year-olds showed an average gain of 3.0 points and 4-year-olds of 2.5 points out of a possible 10 (Figure 15).

15. PALS average scores, Year 4 pre – post

Task (highest possible score)	Average score		Difference
	Pre-test	Post-test	
Age 3			
Alphabet knowledge ^a (26) (N=25)	7.9	16.1	+8.2
Print and word awareness (10) (N=25)	4.5	7.5	+3.0
Age 4			
Alphabet knowledge (26) (N=88)	11.2	20.5	+9.3
Print and word awareness (10) (N=88)	4.7	7.2	+2.5

^a PEK-ERF administered only the upper-case task. PALS also offers a lower-case alphabet recognition task for children able to identify 16 or more upper-case letters (Invernizzi et al., 2004).

Note: Teachers administered PALS assessments to children. During the program's fourth year, baseline assessments were administered in October 2009 (pre-test), and follow-up assessments in May 2010 (post-test).

² The *PALS-PreK Teacher's Manual* cites data indicating upper-case letter naming as a more developmentally appropriate task for preschool children, although the assessment also offers a lower-case alphabet recognition task for children able to identify 16 or more upper-case letters (Invernizzi et al., 2004, p. 49). PEK-ERF administered only the upper-case task.

Researchers also examined relationships between improvement in PALS scores and the number of days attended by children in each age group in each setting. Results indicated there was no significant relationship (i.e., correlation) between the number of days attended and gains in children's PALS scores.

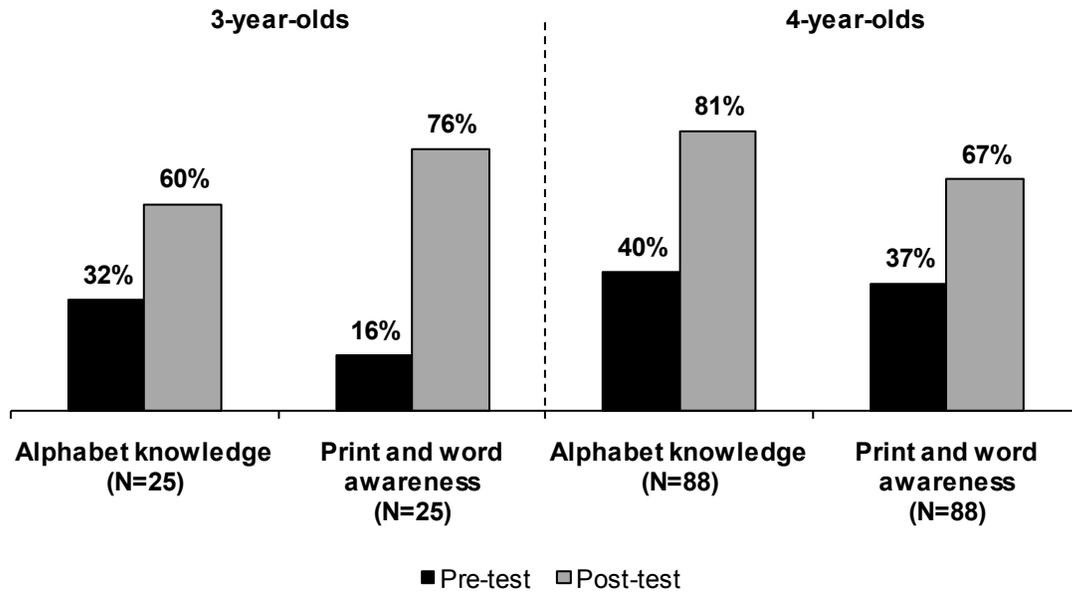
Progress toward program benchmarks

PEK-ERF also established benchmarks for PALS assessments. The program target for alphabet knowledge strived for 90 percent of children identifying at least 14 of the 26 letters. The target for print and word awareness strived for 90 percent of children identifying 7 out of the 10 possible items. These targets can be viewed in light of the following spring developmental ranges for 4-year-olds' scores presented in the *PALS-PreK Teacher's Manual* (Invernizzi et al., 2004): 12 to 21 for uppercase alphabet knowledge, and 7 to 9 for print and word awareness. The manual cautions readers that ranges are based on a preliminary analysis of approximately 350 children, and that it should not be assumed that those falling below the ranges are at risk and that those above do not need additional literacy instruction. In the manual's own language, ranges are described as follows:

In this analysis, we found that PALS-PreK scores within the spring developmental ranges ... were typical of students in the bottom quartile of those who were later defined as successful readers in first grade. That is, preschool children scoring within these developmental ranges tended to be those who just met the definition of successful reader in the fall of first grade.
—(Invernizzi et al., 2004, p. 63).

On average, 4-year-olds were in the middle of the developmental range for print and word awareness (with an average of 7.2) and above the developmental range for uppercase alphabet knowledge (with an average of 20.5) in the spring. Figure 16 shows the percentages of 3- and 4-year-old children meeting PEK-ERF's targets for PALS at baseline and follow-up. Results show that for alphabet knowledge, 32 percent of the 3-year-olds and 40 percent of the 4-year-olds met the target (i.e., correctly identified 14 letters) at pre-test, and 60 percent of the 3-year-olds and 81 percent of the 4-year-olds met the target at post-test. For print and word awareness, 16 percent of the 3-year-olds and 37 percent of the 4-year-olds met the target (i.e., correctly identified 7 or more items) at pre-test, and 76 percent of the 3-year-olds and 67 percent of the 4-year-olds met the target at post-test. The program's annual target was not met for both age groups and settings (Figure A12).

16. Children meeting PALS target scores, Year 4 pre – post



Note: Teachers administered PALS assessments to children. During the program's fourth year, baseline assessments were administered in October 2009 (pre-test), and follow-up assessments in May 2010 (post-test).

Peabody Picture Vocabulary Test IV (PPVT)

The Peabody Picture Vocabulary Test IV (PPVT) measures children's English receptive vocabulary. Wilder Research staff conducted one-on-one assessments with 4-year-olds participating in PEK-ERF school and child care programs. Because some children also participated in the Saint Paul Early Childhood Scholarship program, their pre-assessments were administered by the University of Minnesota's Center for Early Education and Development (CEED) staff member who is the evaluator for that program, in order to eliminate duplication of testing. Pre-assessments were administered in fall 2009 and post-assessments in spring 2010. All post-assessments were administered by Wilder Research staff. Results presented here reflect 77 4-year-olds who had both pre- and post-assessment scores (81% of all 4-year-olds).

Progress from pre- to post-test

Researchers analyzed PPVT results using standard scores. Standard scores have a mean of 100 (and a standard deviation of 15) in the national normative sample. These scores are also age-standardized. This means that no change in scores from one year to the next indicates normative progress, positive change indicates accelerated progress, and negative change indicates slower progress in comparison to one's peers. As shown in Figure 17, PEK-ERF participants made accelerated progress in English receptive vocabulary from

pre-test to post-test overall with an average gain of 3.5 points. Accelerated progress was made by children in both elementary school and child care settings (gains of 4.5 and 1.6 points, respectively). The average mean score for children at the child care centers was almost reaching the national average at post-test (97.9).

17. PPVT average standard scores, Year 4 pre – post

Program	Average standard scores ^a		Difference
	Pre-test	Post-test	
Elementary school sites (N=51)	88.4	92.9	+4.5
Child care centers (N=26)	96.3	97.9	+1.6
Overall (N=77)	91.1	94.6	+3.5

^a Standard scores have a mean of 100 and a standard deviation of 15 in the national normative sample. No change in scores from one year to the next indicates normative progress, positive change indicates accelerated progress, and negative change indicates slower progress in comparison to one’s peers.

Note: PPVT was administered one-on-one with participating 4-year-olds. During the program’s fourth year, baseline assessments were administered in October and November 2009 (pre-test). Follow-up assessments were administered in April 2010 (post-test). Results presented here reflect 4-year-olds with both pre- and post-assessment scores.

Researchers also examined the relationship between the number of days attended by children in each setting and their improvements on the PPVT. Significant relationships were not found between the number of days attended and gains in PPVT scores.

Progress toward program benchmarks

For the PPVT, PEK-ERF established the target of children gaining at least four standard score points from pre-test to post-test. Again, positive change in standard scores indicates accelerated progress compared to one’s peers. Half of the PEK-ERF children met the target (51%). A higher percentage of the children at elementary schools than at child care centers met the target (57% vs. 38%) (Figure A13).

Goal 6: Parent capacity

Goal: Increase parent/family involvement in family literacy activities.

Family Learning Strategies Survey

During the fourth year, a parent phone interview was conducted by Wilder Research in April 2010. The interview questions were based on a parent self-administered Family Learning Strategies Survey. The survey was developed by the program’s evaluator from

Saint Paul Public Schools and the project coordinator to assess parents' involvement in their children's learning. A scoring grid was used to categorize responses to each question as either "developing," "acceptable," or "model." Additionally, parents were asked about their participation in school activities.

Parents of 80 of the 143 children (56%) completed the phone interviews. Eligible parents had 3- or 4-year-olds who were enrolled in the PEK-ERF program for at least two months from September 2009 to February 2010. The telephone interviews were conducted in English. Parents who were not interviewed had either moved and their current information was not available, or refused to be interviewed. Wilder Research offered to interview non-English speaking parents in their own language (Spanish, Somali, or Hmong), but these parents refused to participate or could not be contacted.

Results show that 9 of the 11 questions had more than 80 percent of parents scoring at the acceptable or model level. These questions addressed how frequently parents have conversations with their child; keep informed of their child's school or child care activities; take their child to events and activities; allow their child to use paper and crayons or some other writing tools; go to their child's school or child care center to attend events or activities, volunteer, or attend meetings; read in front of their child at home; write in front of their child at home; read aloud to their child or look at books with them; and sing songs with their child. Areas with the highest percentages of parents in the developing category included the amount of television viewing by children (55% developing) and taking children to the public library and checking out books (60% developing) (Figure A14).

Looking at differences between settings, there were higher percentages of child care than elementary parents in the developing category for reading aloud to children or looking at books with them, and for taking children to the public library and checking out books (Figure A15). In contrast, more parents of children in child care centers than in schools were in the acceptable or model level for going to their child's child care site or school to volunteer or attend events, activities, or meetings.

Parents also reported that they attended a variety of school activities (Figure A16). Almost all parents attended a parent-teacher conference (94% at schools and child care centers). Most parents also attended an open house (73%), family social or educational events (68%), and student performance events (63%). Parents were less likely to volunteer at school (40%) and attend parent classes (31%), school committee or site council meetings (23%), and parent organization or group meetings (19%).

Progress toward program benchmarks

PEK-ERF established the benchmark that all parents would have at least 75 percent of their responses scored at the acceptable level or higher on the Family Learning Strategies Survey. The benchmark was not met for all parents, but results show that 61 parents (76%) had at least 75 percent of their responses at the acceptable level or higher. Additionally, all parents attended at least one school activity during the program year.

Issues for consideration

PEK-ERF results for student achievement were positive in the first three years. The annual benchmarks in those years were met or almost met in all language and literacy assessments. Student academic results tended to be higher at schools than at child care centers. For example, in 2008-09, 74-89 percent of 4-year-olds at elementary schools met IGDI targets in the spring, compared to 45-68 percent of 4-year-olds at child care centers, and 82 percent of 4-year-olds at schools attained the TROLL target in the spring, compared to 68 percent of 4-year-olds at child care centers.

In 2009-10, PEK-ERF children made accelerated academic progress, but the program benchmarks were not met on any of the language and literacy indicators. Results for 4-year-olds at school sites and child care centers were similar. A lower number of days and shorter hours offered at schools might contribute to the lower academic results for school children in 2009-10 than in the previous years. Results also showed that, on average, school children made higher gains on most of the assessments than child care children. Continuing to improve the collaborations with staff at child care centers is important as they will participate in the PEK program following PEK-ERF's conclusion.

Results of parent capacity outcomes in 2009-10 were positive. The annual benchmarks were met. Items showing the most room for growth on the Family Learning Strategies Survey included how frequently parents take their children to the library and check out books, and how frequently children watch television. These results can inform PEK efforts to help parents understand how best to support their children's learning.

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Appendix

Program components

Student demographics and attendance

Goal 1: Staff capacity

Goals 2 and 3: Curriculum and instruction and classroom environment

Goal 4: PAE alignment

Goal 5: Student achievement

Goal 6: Parent capacity

Program components

A1. Sample PEK-ERF daily schedule

<p>Ease into the day</p>	<ul style="list-style-type: none"> ▪ Welcome/greet children; engage children in conversation ▪ Children “sign in” ▪ Children read books or write on white boards independently as they arrive
<p>Community circle (with daily lesson)</p>	<p><i>A time to gather together, introduce the area of study, plan the day, “Show and Tell”</i></p> <ul style="list-style-type: none"> ▪ Use picture/word schedules ▪ Write out daily message and encourage children to read along ▪ Introduce 3-5 new vocabulary words using picture books, picture cards, and real objects ▪ Read to students, using different types of books that support the area of study, including reading and re-reading favorite books and stories ▪ Use shared reading techniques (e.g., sentence completion, prediction, recall, and open-ended questions) and dialogic reading – specifically, the PEER sequence (prompting, evaluating, expanding, and repeating) ▪ Use song charts with pictures and words as cues to help children sing/read ▪ Encourage sound manipulation (e.g., rhyme, stretching, alliteration, matching sounds, clapping syllables, chanting, listening for words that are the same or different, and blending) ▪ Help the children learn the alphabet; notice alliteration, letter usage. Use songs, alphabet books, and nursery rhymes to increase alphabetic knowledge
<p>Small group</p>	<p><i>A time to give extra attention, more conversation, individualize to specific skill needs, and scaffolded instruction, a time for children to “DO”</i></p> <ul style="list-style-type: none"> ▪ Use auditory activities that require children to learn to distinguish and compare sounds ▪ Use select children’s books that emphasize sounds, rhyming and alliteration, including poetry ▪ Encourage sound manipulation (e.g., rhyme, stretching, alliteration, matching sounds, clapping syllables, listening for words that are the same or different, and blending) ▪ Play environmental sound games to connect sounds to meaning ▪ Help the children write letters using a variety of media and provide tactile experiences with print – paint, sand, play dough, etc. ▪ Use teacher dictation; encourage children to read when finished ▪ Adults interact and have conversation with children and encourage conversation among peers, striving for five turn-taking conversations

A1. Sample PEK-ERF daily schedule (continued)

<p>Active learning (50-60 minutes)</p>	<p><i>A time for the children to explore and practice new skills independently with support and input from the teacher</i></p> <ul style="list-style-type: none"> ▪ Adults interact and have conversation with children as they explore the room, investigate learning centers, work on projects, and extend the area of study ▪ Adults are available to talk, read, and write with children, scaffolding learning and discoveries (dictation, computer use, utilize listening centers) ▪ Adults support and encourage children’s use of alphabet puzzles, charts, stencils, tiles, environmental print, logos, calendars, money, etc. ▪ Adults support and encourage book use in centers with children reading and having conversation, building oral language and vocabulary
<p>Regroup to revisit</p>	<p><i>Opportunities to revisit the day’s lesson, explore some aspect of the children’s work, or plan an extension of learning for the afternoon or the following day</i></p> <ul style="list-style-type: none"> ▪ Encourage children to talk about the day’s activities using open-ended questions ▪ Encourage confidence in oral language skills by having children share something specific they worked on that day ▪ Co-create plans for the afternoon or the next day with the children
<p>Meals and snack</p>	<p><i>An opportunity for rich vocabulary and oral language development</i></p> <ul style="list-style-type: none"> ▪ Encourage children to talk about activities (past, present, and future) using open-ended questions ▪ Provide opportunities to be part of conversations that use extended discourse, encourage children to use language for a variety of purposes, and support them in communicative attempts (e.g., gestures, eye contact, imitating the child)
<p>Rest time - A designated time for children to rest. They may look at books or listen to music quietly.</p>	
<p>Extended learning (Active learning, small groups, and extended projects; 30-40 minutes)</p>	<p><i>A time for children to explore and practice new skills independently with support and input from the teacher (extends learning in oral language, phonological awareness, print awareness, and alphabet knowledge)</i></p> <ul style="list-style-type: none"> ▪ Adults interact and have conversation with children as they explore the room, investigate learning centers, work on projects, and extend themes (oral language) ▪ <i>Doors to Discovery Centers</i> are available for active learning in all domains, including math, science, dramatic play, writing, reading, music, etc. ▪ Adults are available to talk, read, write with children, scaffolding learning and discoveries (dictation, computer use, utilize listening centers) (all literacy areas) ▪ Adults support and encourage children’s use of alphabet puzzles, charts, stencils, tiles, environmental print, logos, calendars, money, etc. (all literacy areas) ▪ Adults support and encourage book use in centers with children reading and having conversation, building oral language and vocabulary (all literacy areas) ▪ Use time to pursue projects based on students’ interests (all literacy areas)

A1. Sample PEK-ERF daily schedule (continued)

Small group/ Five-day read aloud	<p><i>A time to learn literacy skills and a love of learning.</i></p> <ul style="list-style-type: none"> ▪ Read a book that supports the ongoing area of study focusing on: <ul style="list-style-type: none"> ▪ Day 1: Vocabulary and storyline ▪ Day 2: Story Elements: characters, feelings, beginning/middle/end, problem/resolution ▪ Day 3: Dialogic Reading: open-ended questions, allow children to predict words and phrases ▪ Day 4: Concepts of Print: front & back, where to start reading, left to right progression, return sweep, difference between word and letter ▪ Day 5: Read for enjoyment and concept development; dramatize/pretend/using props
Large motor	<p><i>A time to utilize the joy of movement and sensory input to allow more literacy learning</i></p> <ul style="list-style-type: none"> ▪ Do group movement activities incorporating songs, chants, games, signs, logos ▪ Bring the area of study into large motor play and movement ▪ Have conversations with children
Closing meeting	<p><i>A time to review the day, reinforce vocabulary and background knowledge, set the stage for the next day</i></p> <ul style="list-style-type: none"> ▪ Additional large group reading, reread the first book, or a book that supports the ongoing theme ▪ Teach specific book knowledge – discuss the cover of the book, authors, illustrators, title page, etc. ▪ Use social stories to teach academic, social skill, and functional routines to children, with the help of print and pictures
Transitions	<ul style="list-style-type: none"> ▪ Use transition rituals, include songs, rhymes and chants ▪ Use picture/word schedules, change boards, transition and process routines integrated into daily activities and routines ▪ Encourage children to notice that letters and symbols are all around them ▪ Play word games, using the children’s names when possible, pointing out sounds, rhyming, etc.

Source: This figure was based on a table in a grant performance report that PEK-ERF staff prepared for the federal U.S. Department of Education.

Student demographics and attendance

A2. Children's characteristics, Year 4

	Elementary school sites		Child care centers	
	N	Percent	N	Percent
Age as of September 1, 2009				
3	-	-	33	48%
4	95	100%	36	52%
Total	95	100%	69	100%
Gender				
Male	55	58%	28	41%
Female	40	42%	41	59%
Total	95	100%	69	100%
Eligible for free or reduced-price lunch				
Yes	75	79%	53	77%
No	20	21%	16	23%
Total	95	100%	69	100%
Ethnicity				
American Indian	-	-	2	3%
Asian	18	19%	5	7%
Latino	21	22%	6	9%
Black	42	44%	51	74%
White	14	15%	5	7%
Total	95	100%	69	100%
Home language				
English	47	50%	63	91%
Spanish	16	17%	2	3%
Somali	12	13%	0	0%
Hmong	17	18%	1	1%
Other/bilingual	3	3%	3	5%
Total	95	100%	69	100%

A2. Children's characteristics, Year 4 (continued)

	Elementary school sites		Child care centers	
	N	Percent	N	Percent
Received special education services				
Yes	8	8%	9	13%
No	87	92%	60	87%
Total	95	100%	69	100%
In target population^a				
Yes	84	88%	58	84%
No	11	12%	11	16%
Total	95	100%	69	100%

^a Child is in one or more of the following categories: eligible for free or reduced-price lunch, ELL, or receives Special Education services.

A3. Children's attendance, Year 4

Number of days present	Elementary school sites		Child care centers	
	N	Percent	N	Percent
Age 3				
Fewer than 59 days	-	-	2	6%
60-80	-	-	1	3%
81-100	-	-	0	0%
101-120	-	-	5	15%
121-140	-	-	2	6%
141-160	-	-	8	24%
More than 160 days ^a	-	-	15	45%
Total	-	-	33	100%
Average		-	145	
Median		-	157	
Range		-	43-183	
Age 4				
Fewer than 59 days	22	23%	2	6%
60-80	5	5%	1	3%
81-100	6	6%	0	0%
101-120	4	4%	5	14%
121-140	14	15%	7	19%
141-160	41	43%	7	19%
More than 160 days ^a	3	3%	14	39%
Total	95	100%	36	100%
Average		111	142	
Median		136	155	
Range		10-162	24-180	

^a Elementary schools offered 163 days of programming, and child care centers offered 182-185 days of programming.

Note: Year 4 spanned September 1, 2009, to May 31, 2010.

Goal 1: Staff capacity

A4. PEK-ERF professional development, Year 4

Topic	Key learning outcomes	Learning formats	Hours/timeline	Responsible staff
Response to Instruction; Building Vocabulary, Conversations and Concepts	<ul style="list-style-type: none"> ▪ Review of vocabulary research ▪ Discussion of techniques that move children to target through explicit instruction ▪ Practice methods that promote vocabulary in the classroom ▪ Instructional strategies that support young children's literacy learning 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	19.5 hours (6.5 hrs per session) August 25-27, 2009	<ul style="list-style-type: none"> ▪ Consultant, Ohio State University ▪ SPPS Pre-K managers ▪ SPPS Pre-K coaches
Language and Vocabulary Development	<ul style="list-style-type: none"> ▪ Overview of target vocabulary choice and integrating into the lesson plan 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	3 hours September 30, 2009	<ul style="list-style-type: none"> ▪ SPPS Pre-K managers ▪ SPPS Pre-K coaches
Response to Instruction (RTI)	<ul style="list-style-type: none"> ▪ Review of classroom data and discussion of implications for instruction ▪ Discussion of Tier I ▪ Differentiated instruction 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	3 hours November 4, 2009	<ul style="list-style-type: none"> ▪ SPPS Pre-K managers ▪ SPPS Pre-K coaches
Response to Instruction (RTI) – Tier II – Climbing the Pyramid	<ul style="list-style-type: none"> ▪ Review of classroom data and discussion of implications for instruction ▪ Discussion of Tier I, Tier II and Tier III instruction ▪ Planning interventions for Tier II 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	3 hours December 2, 2009	<ul style="list-style-type: none"> ▪ SPPS Pre-K managers ▪ SPPS Pre-K coaches
Classroom Assessment Scoring System (CLASS) Observer Training Schedule	<ul style="list-style-type: none"> ▪ Review the CLASS dimensions ▪ Identify/analyze professional development strategies ▪ Observe and practice giving feedback ▪ Goal setting 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	14.5 hours December 10-11, 2009	<ul style="list-style-type: none"> ▪ Consultant, Center for Early Education and Development (CEED), University of Minnesota

A4. PEK-ERF professional development, Year 4 (continued)

Topic	Key learning outcomes	Learning formats	Hours/timeline	Responsible staff
Early Language and Literacy Classroom Observation Pre-K Tool (ELLCO)	<ul style="list-style-type: none"> ▪ Familiarize participants with the structure of the ELLCO ▪ Familiarize participants with each item on the ELLCO ▪ Teach participants to take specific evidence ▪ Practice taking evidence and rating items 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	6.5 hours February 11, 2010	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ Project Internal Assessment Coach
Sensory Play and Instructional Supports	<ul style="list-style-type: none"> ▪ Overview of sensory development and learning ▪ Implication of positive and negative sensory input ▪ Incorporating sensory play into the lesson ▪ Instructional supports and sensory play 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	3 hours February 15, 2010	<ul style="list-style-type: none"> ▪ Educational Consultant ▪ Project Coordinator
Planning for Concept Development	<ul style="list-style-type: none"> ▪ Explore concept development and implication for learning ▪ Demonstrate the connections to CLASS, ELLCO, ECW tools and work with vocabulary semantic mapping ▪ Backward Design 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	3 hours February 22, 2010	<ul style="list-style-type: none"> ▪ Consultant, University of Saint Thomas ▪ SPPS Pre-K manager ▪ SPPS Pre-K coaches
Pre-Kindergarten Parent Education and Involvement	<ul style="list-style-type: none"> ▪ Review the role of parent education in Pre-Kindergarten 	<ul style="list-style-type: none"> ▪ Lecture ▪ Small group learning and dialogue ▪ Experiential 	3 hours April 28, 2010	<ul style="list-style-type: none"> ▪ SPPS Pre-K parent educators ▪ SPPS Pre-K family connection workers

Possible hours for training sessions: 36

Possible hours for one-on-one or small group coaching sessions: 51

Total possible professional development hours: 87

Source: This table was developed by PEK-ERF program staff, with minor modifications made for purposes of this report.

Goals 2 and 3: Curriculum and instruction and classroom environment

A5. ELLCO results by classroom, Year 4 pre – post

Classroom	Subscale	Pre-test	Post-test
Class 1	Classroom Structure	4.8	4.8
	Curriculum	4.3	4.3
	The Language Environment	3.5	4.5
	Books and Book Reading	4.6	5.0
	Print and Early Writing	4.3	5.0
Class 2	Classroom Structure	4.8	4.8
	Curriculum	3.7	4.0
	The Language Environment	3.3	4.5
	Books and Book Reading	4.6	4.6
	Print and Early Writing	4.3	3.7
Class 3	Classroom Structure	4.8	5.0
	Curriculum	4.3	5.0
	The Language Environment	4.5	4.8
	Books and Book Reading	4.8	4.6
	Print and Early Writing	4.3	3.7
Class 4	Classroom Structure	4.5	5.0
	Curriculum	4.0	5.0
	The Language Environment	3.5	4.5
	Books and Book Reading	5.0	5.0
	Print and Early Writing	3.7	4.3
Class 5	Classroom Structure	3.8	4.0
	Curriculum	2.7	4.3
	The Language Environment	2.8	4.3
	Books and Book Reading	4.2	4.6
	Print and Early Writing	3.7	3.3
Class 6	Classroom Structure	4.8	4.8
	Curriculum	3.3	4.7
	The Language Environment	3.8	4.0
	Books and Book Reading	3.8	4.8
	Print and Early Writing	3.3	4.0

Note: During the program's fourth year, baseline ELLCO assessments were conducted in October 2009 (pre-test), and follow-up assessments were conducted in April 2010 (post-test). The Saint Paul Public Schools assessment coach conducted the ELLCO assessments.

A6. Detailed ELLCO results for areas within subscales, Year 4 pre – post

ELLCO area (possible points)	Pre-test	Post-test
General Classroom Environment		
Organization of the classroom (5)	5.0	4.8
Contents of the classroom (5)	4.2	4.5
Classroom management (5)	4.3	4.7
Personnel (5)	4.7	4.8
Classroom Structure (20)	18.2	18.8
Approaches to curriculum (5)	3.8	4.7
Opportunities for child choice and initiative (5)	4.2	4.8
Recognizing diversity in the classroom (5)	3.2	4.2
Curriculum (15)	11.2	13.7
Language and Literacy		
Discourse climate (5)	4.2	4.8
Opportunities of extended conversations (5)	4.2	4.5
Efforts to build vocabulary (5)	2.2	4.5
Phonological awareness (5)	3.7	3.8
The Language Environment (20)	14.2	17.7
Organization of book area (5)	4.3	4.7
Characteristics of books (5)	4.7	5.0
Books for learning (5)	4.2	4.3
Approaches to book reading (5)	4.7	4.8
Quality of book reading (5)	4.7	5.0
Books and Book Reading (25)	22.5	23.8
Early writing environment (5)	3.7	4.3
Support for children's writing (5)	3.7	3.7
Environmental print (5)	4.5	4.0
Print and Early Writing (15)	11.8	12.0

Note: During the program's fourth year, baseline ELLCO assessments were conducted in October 2009 (pre-test), and follow-up assessments were conducted in April 2010 (post-test). The Saint Paul Public Schools assessment coach conducted the ELLCO assessments.

A7. CLASS PreK results by subscale, spring 2010

Subscale	Mean^a	Standard deviation	Range
Emotional support			
Positive climate	6.7	0.5	6-7
Negative climate ^a	7.0	0.0	7-7
Teacher sensitivity	5.7	0.8	5-7
Regard for student perspectives	5.2	0.8	4-6
Classroom organization			
Behavior management	6.7	0.5	6-7
Productivity	6.7	0.5	6-7
Instructional Learning Formats	5.5	0.6	5-6
Instructional support			
Concept Development	4.3	1.2	3-6
Quality of Feedback	5.2	1.0	4-6
Language Modeling	5.3	0.8	4-6

^a To be consistent with the other items, the negative climate score is recoded as 1=high and 7=low. A higher score means a less negative climate.

Note: During the program's fourth year, CLASS PreK assessments were completed by the SPPS Pre-Kindergarten assessment coach based on classroom videotapes taken in October-November 2009 (pre-test) and April-May 2010 (post-test).

A8. CLASS PreK scores by classroom and subscale, spring 2010

Subtest	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Positive climate	6	7	7	6	7	7
Negative climate ^a	7	7	7	7	7	7
Teacher sensitivity	5	5	6	5	6	7
Regard for student perspectives	6	5	5	4	5	6
Behavior management	7	7	7	6	6	7
Productivity	6	7	7	6	7	7
Instructional learning formats	5	6	6	5	5	6
Concept development	6	5	5	3	3	4
Quality of feedback	6	6	6	4	4	5
Language modeling	6	6	6	5	4	5
Classroom average^b	6.0T*	6.1T*	6.2T*	5.1T*	5.4T*	6.1T*

* *T=target met.*

^a *To be consistent with the other items, the negative climate score is recoded as 1=high and 7=low. A higher score means a less negative climate.*

Note: *During the program's fourth year, CLASS PreK assessments were completed by the SPPS Pre-Kindergarten assessment coach based on classroom videotapes taken in October-November 2009 (pre-test) and April-May 2010 (post-test).*

Goal 4: PAE alignment

A9. Results of classroom observations for alignment with the Project for Academic Excellence, spring 2010

Indicators of alignment		Number of classrooms	
		Fully implemented	Partially implemented
Early Childhood Workshop			
1. Ease into the day	a. Greets all children	6	-
	b. Calm, quiet activities are intentionally created by teacher	6	-
	c. All teachers participate and support children in selected activities	6	-
	There was evidence of Accountable Talk	5	-
2. Morning/afternoon meeting	a. Morning/afternoon meeting:		
	Greeting (all by teacher/peer)	6	-
	Daily massage	6	-
	Read aloud	6	-
	b. Children have opportunities to talk	6	-
	c. There are opportunities for some children to participate in leadership roles	6	-
	d. All teachers participate	6	-
	There was evidence of Accountable Talk	6	-
	Duration: average = 25 minutes; range = 15 to 33 minutes		
3. Small group	a. Maximum 6 children/1 teacher	6	-
	b. Teachers explicitly teach 1 skill	5	1
	c. There is a balance of teacher/child talk	6	-
	d. Teacher is observed using documentation	5	1
	Checklists	1	-
	Anecdotal notes	4	-
	Pictures/videos	1	-
	e. Homogeneous groups based on student data	6	-
	There was evidence of Accountable Talk	6	-
	Duration: average = 17 minutes; range = 13 to 24 minutes		

A9. Results of classroom observations for alignment with the Project for Academic Excellence, spring 2010 (continued)

Indicators of alignment		Number of classrooms	
		Fully implemented	Partially implemented
Early Childhood Workshop			
4. Active learning	a. Teachers move around the room	6	-
	Engaging in conversational turn taking with children	6	-
	Asking open-ended questions	4	2
	Scaffolding children's play	6	-
	Encouraging critical thinking	3	3
	b. All centers provide hands-on experiences for children	6	-
	c. Learning Centers have literacy props that reflect the area of study	6	-
	d. All centers provide opportunities for children to practice "talk, read, write"	6	-
	There was evidence of Accountable Talk	6	-
	Duration: average = 45 minutes; range = 28 to 57 minutes		-
5. Regroup to revisit	a. Teacher revisits an idea from the day and/or connects to the next day	4	-
	b. Student work is reviewed	2	-
	c. Teacher and children participate in a conversation	4	-
	There was evidence of Accountable Talk	4	-
Instructional Strategies: routines and rituals			
6. Sign-in	a. Teaching letter formation	5	-
	b. Adapting procedure for individual progress	3	3
7. Independent reading	a. Children are engaged	2	-
	b. Enough books are accessible for each child to choose	2	-
	c. Teachers model reading behaviors	2	-
8. Daily message	a. All children can see	6	-
	b. Clear teaching point	6	-
	c. Teacher and children read completed message together	3	-
9. Interactive writing (one observed)^a	a. Teachers and children construct text	2 ^a	-
	b. Teacher models, demonstrates, guides practice of specific writing strategies, engages all children	2 ^a	-
	c. Teacher and children share pen	2 ^a	-
	d. Teacher engages all children in the writing process	2 ^a	-
	e. Evidence of interactive writing is posted around the room	5	-

A9. Results of classroom observations for alignment with the Project for Academic Excellence, spring 2010 (continued)

Indicators of alignment		Number of classrooms	
Instructional Strategies: routines and rituals		Fully implemented	Partially implemented
10. Read aloud	a. One during morning/afternoon meeting	6	-
	b. One related to area of study	6	-
	c. There is explicit teaching of literacy concepts	6	-
	d. Teacher and students engage in conversation around the book	6	-
	e. One or two teaching points are raised	6	-
	f. Teacher holds book so all can see	6	-
11. Shared reading (one observed)	a. There is explicit teaching of a specific standard or concepts about print	0 ^a	-
	b. All children can see	2 ^a	-
	c. Evidence of other shared reading around the room	6	-
12. Transition	a. Effective and efficient	6	-
	b. Incorporate instructional activity	6	-
Classroom Environment and Expectations			
13. Area of study	a. Clearly visible throughout the day and classroom	6	-
	b. Embedded in most parts of the day: read aloud, interactive writing, shared reading, science, math, block, dramatic play, writing center, books area, listening center, small group, and sensory	6	-
14. Children's original work	a. Children's original work is displayed throughout the classroom (pictures, writing, stories, art projects)	6	-
	b. Most children have a sample of work posted	6	-
15. Children's names	a. Children's names are displayed	6	-
	b. Number of places: average=7; range = 6 to 8		
16. Lesson Plan	a. Lesson plan is completed and followed	6	-
	b. Posted or easily assessable	6	-
	c. Detailed to guide daily activities	6	-
	d. Family connection lesson plan	6	-
17. Word wall	a. Displayed left to right	6	-
	b. Eye level	6	-
	c. Children's names	6	-
	d. Other words	6	-
	e. Used by teacher as a reference	2	-
	f. Evidence of teachers involving children in creation	5	-

A9. Results of classroom observations for alignment with the Project for Academic Excellence, spring 2010 (continued)

Indicators of alignment		Number of classrooms	
Classroom Environment and Expectations		Fully implemented	Partially implemented
18. Classroom expectations	a. Classroom expectations are clear	6	-
	b. Morning/afternoon meeting	6	-
	c. Active learning time	6	-
	d. Transitions	6	-
	e. Small group	6	-
19. Visual schedule	a. A visual schedule is displayed and may be used to provide support for self-regulation	6	-
20. Accountable Talk bubbles	a. Accountable Talk bubbles are posted	6	-
21. Core content standards	a. Core content standards are posted	6	-
	b. Children's work supports standards	5	-

^a Data are available for three classrooms.

Note: Classroom observations were conducted by the Saint Paul Public Schools assessment coach, based on a tool developed by the evaluator and program coaches.

Goal 5: Student achievement

A10. Children meeting IGDl target scores, Year 4 pre - post

	Pre-test		Post-test		Difference ^a	
	N	%	N	%	N	%
Age 3						
<i>Child care centers</i>						
Picture Naming	8/25	32%	19/25	76%	11/25	44%
Rhyming	4/26	15%	18/26	69%	14/26	54%
Alliteration	6/26	23%	19/26	73%	13/26	50%
Age 4						
<i>Elementary school sites</i>						
Picture Naming	13/59	22%	29/59	49%	16/59	27%
Rhyming	7/59	12%	27/59	46%	20/59	34%
Alliteration	4/59	7%	21/59	36%	17/59	29%
<i>Child care centers</i>						
Picture Naming	5/29	17%	15/29	52%	10/29	35%
Rhyming	6/29	21%	15/29	52%	9/29	31%
Alliteration	2/28	7%	11/28	39%	9/28	32%
<i>Overall</i>						
Picture Naming	18/88	20%	44/88	50%	26/88	30%
Rhyming	13/88	15%	42/88	48%	29/88	33%
Alliteration	6/87	7%	32/87	37%	26/87	30%

^a Difference between the percentage meeting the target at pre-test and the percentage meeting the target at post-test. Target scores for 3-year-olds were 18 for picture naming, 7 for rhyming, and 5 for alliteration, and for 4-year-olds were 26 for picture naming, 12 for rhyming, and 8 for alliteration.

Note: During the program's fourth year, teachers administered IGDIs in October, January, March, and May. This figure presents results for children administered IGDIs in both October 2009 (pre-test) and May 2010 (post-test).

A11. Children meeting TROLL target scores, Year 4 pre - post

	Pre-test		Post-test		Difference ^a	
	N	%	N	%	N	%
Age 3 (scored 56 or above)^b						
Child care centers	13/26	50%	18/26	69%	5/26	19%
Age 4 (scored 66 or above)^b						
Elementary school sites	9/60	15%	36/60	60%	27/60	45%
Child care centers	13/29	45%	17/29	59%	4/29	14%
Overall	22/89	25%	53/89	60%	31/89	35%

^a Difference between the percentages scoring at or above the 50th percentile at pre-test and post-test.

^b 50th percentile based on norming sample of low-income, high-risk children.

Note: Teachers completed the TROLL for individual students. During the program's fourth year, teachers conducted baseline TROLL assessments in October 2009 (pre-test), and follow-up assessments in April 2010 (post-test). For each age group, both fall and spring scores were compared to the spring 50th percentiles based on a norming sample of low-income, high-risk children (Dickinson et al., 2001).

A12. Children meeting PALS target scores, Year 4 pre - post

	Pre-test		Post-test		Difference ^a	
	N	%	N	%	N	%
Age 3						
<i>Child care centers</i>						
Alphabet knowledge	8/25	32%	15/25	60%	7/25	28%
Print and word awareness	4/25	16%	19/25	76%	15/25	60%
Age 4						
<i>Elementary school sites</i>						
Alphabet knowledge	21/59	36%	50/59	85%	29/59	49%
Print and word awareness	18/59	30%	35/59	59%	17/59	29%
<i>Child care centers</i>						
Alphabet knowledge	14/29	48%	21/29	72%	7/29	24%
Print and word awareness	15/29	52%	24/29	83%	9/29	31%
<i>Overall</i>						
Alphabet knowledge	35/88	40%	71/88	81%	36/88	41%
Print and word awareness	33/88	37%	59/88	67%	26/88	30%

^a For alphabet knowledge, this difference is between the number and percentage of children improving from scoring below 14 to scoring at or above 14. For print and word awareness, this difference is between the number and percentage of children improving from scoring below 7 to scoring at or above 7.

Note: Teachers administered PALS assessments to children. During the program's fourth year, PALS assessments were administered in October, January, and May. This figure presents results for children administered IGDIs in both October 2009 (pre-test) and May 2010 (post-test).

A13. Four-year-olds meeting target for PPVT, Year 4 pre - post

Program	Gain of 4 standard score points or more^a	
	Number	Percent
Elementary school sites	29/51	57%
Child care centers	10/26	38%
Overall	39/77	51%

^a Standard scores have a mean of 100 and a standard deviation of 15 in the national normative sample. No change in scores from one year to the next indicates normative progress, positive change indicates accelerated progress, and negative change indicates slower progress in comparison to one's peers.

Note: The PPVT was administered one-on-one with participating 4-year-olds. During the program's fourth year, baseline assessments were administered in October 2009 (pre-test) and follow-up assessments in April-May 2010 (post-test).

Goal 6: Parent capacity

A14. Results of Family Learning Strategies Survey, Year 4: Overall (N=80)

Question	Developing	Acceptable	Model^a
My child watches television.	55%	28%	18%
I read aloud to my child or look at books with them.	11%	31%	58%
I take my child to the public library and check out books.	60%	35%	5%
I have conversations with my child (for example, during mealtimes and when we're traveling together in the car or bus).	-	14%	86%
I sing songs with my child.	16%	41%	43%
I keep informed of my child's school or daycare activities (checking the backpack, reading newsletters, etc.).	-	20%	80%
My children see me reading at home (newspapers, magazines, or books).	9%	8%	84%
I take my child to events and activities (for example, shopping, religious services, movies, museum, or a park).	1%	8%	91%
I go to my child's school or daycare to attend events, activities, to volunteer or attend meetings.	11%	35%	54%
My child sees me writing at home (for example, grocery lists, letters, or checks). (N=49)	5%	30%	65%
I allow my child to use paper and crayons or some other writing tools.	5%	3%	93%

^a A scoring grid was used to categorize responses for individual questions into three levels: developing, acceptable, and model.

Note: The Family Learning Strategies Survey was developed by the program's evaluator from Saint Paul Public Schools and the project coordinator to assess parents' involvement in their children's learning. Wilder Research conducted the survey by telephone in April 2010.

A15. Results of Family Learning Strategies Survey, Year 4: schools and child care centers

Question	Elementary Schools (N=46)			Child Care Centers (N=34)		
	Developing	Acceptable	Model	Developing	Acceptable	Model
My child watches television.	57%	30%	13%	53%	24%	24%
I read aloud to my child or look at books with them.	8%	30%	61%	15%	32%	53%
I take my child to the public library and check out books.	52%	44%	4%	71%	23%	6%
I have conversations with my child (for example, during mealtimes and when we're traveling together in the car or bus).	-	20%	80%	-	6%	94%
I sing songs with my child.	20%	48%	33%	12%	32%	56%
I keep informed of my child's school or daycare activities (checking the backpack, reading newsletters, etc.).	-	20%	80%	-	21%	79%
My children see me reading at home (newspapers, magazines, or books).	7%	9%	85%	12%	6%	82%
I take my child to events and activities (for example, shopping, religious services, movies, museum, or a park).	2%	9%	89%	-	6%	94%
I go to my child's school or daycare to attend events, activities, to volunteer or attend meetings.	15%	33%	52%	6%	38%	56%
My child sees me writing at home (for example, grocery lists, letters, or checks).	4%	33%	63%	6%	27%	68%
I allow my child to use paper and crayons or some other writing tools.	-	-	100%	12%	6%	81%

^a A scoring grid was used to categorize responses for individual questions into three levels: developing, acceptable, and model.

Note: The Family Learning Strategies Survey was developed by the program's evaluator from Saint Paul Public Schools and the project coordinator to assess parents' involvement in their children's learning. Wilder Research conducted the survey by telephone in April 2010.

A16. Parent participation in school events. Family Learning Strategies Survey, Year 4

Event	Percent “yes”		
	Schools (N=45-46)	Center (N=34)	Overall (N=79-80)
Open house	76%	71%	73%
Parent-teacher conference	94%	94%	94%
Student performance	44%	88%	63%
Family social or educational event (e.g., Come and Read, Books and Breakfast, library events, family nights, meetings at centers)	63%	74%	68%
Parent or adult class	33%	29%	31%
School committee or site council	22%	24%	23%
Parent organization or group meeting (PTA or PTO)	15%	24%	19%
Volunteer in child’s classroom or during field trips	41%	38%	40%

Note: Wilder Research conducted the survey by telephone in April 2010.