

# Key Findings: Exploring the Relationship between Oregon's Prenatal-through-Grade 3 Initiatives & Children's Kindergarten Readiness

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## Introduction & Background

Oregon's Kindergarten Readiness Partnership and Innovation Fund (KRPI) was authorized by the Oregon Legislature in 2014 as a means to support innovative, community-driven work to improve children's school readiness and success and to reduce opportunity gaps for the state's most vulnerable children. KRPI uses a framework for improving these outcomes known as the Prenatal-to-Grade 3 (P3) approach. This approach is based on the assumption that individual interventions or programs, no matter how effective, are necessary but not sufficient to create sustained improvements in children's school success. Instead, **the focus of P3 work is to build a system of aligned, coordinated supports from birth through third grade.** Third grade is seen as a key benchmark based on the considerable research that demonstrates children who are meeting academic standards for reading and mathematics in third grade are more likely to be successful in school and to graduate from high school<sup>1</sup>.

The Oregon Early Learning Division (ELD) provides KRPI funds to the state's 16 Early Learning Hubs ("Hubs"), which are given considerable local flexibility to implement innovative approaches (often blending and braiding other funding sources) in one or more of the following areas:

- **Supporting kindergarten readiness** skills and smooth transitions to kindergarten;
- **Increasing family engagement** in children's learning and connecting families and schools as well as families with each other;
- **Providing professional development** to early learning and/or elementary school professionals to improve knowledge and skills; and/or
- **Increasing system alignment, connection, and collaboration** between early learning, K12 and other key partners in the P3 system.

Portland State University's (PSU) Center for Improvement of Child and Family Services (CCF) has partnered with the ELD since the start of the KRPI initiative to evaluate KRPI-related work. In 2017, a new component of the evaluation was added to begin to explore and document longer-term effects of KRPI and other investments in local P3 systems. This Research Brief summarizes the results of this work, which represent the first steps towards understanding whether and how P3 initiatives are affecting school readiness for Oregon's kindergartners.<sup>1</sup> To do this, the CCF evaluation team built a database of local P3 program implementation and Oregon Kindergarten Assessment data in order to (1) describe the nature and content of P3-funded activities; (2) examine whether P3 investments were being made in schools serving children and families facing more challenges in being school-ready; and (3) develop methodology for longer-term evaluation of the school-level outcomes of P3 work.

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<sup>1</sup> For the full report and additional KRPI-related evaluation reports and materials, see: <https://www.pdx.edu/ccf/current-research-projects-0#currentearlychildhood>

## Methodology

In order to build a P3 program implementation database, the CCF research team identified and linked existing data sources, including child-level Oregon Kindergarten Assessment (OKA) scores and demographic data from 2013-2016, school-level demographic and assessment information from 2013-2016, and P3 program implementation data for elementary schools across the state. Elementary schools were identified as a “P3 school” if the school was implementing activities funded by KRPI or through the Oregon Community Foundation’s P3 Initiative or the Early Works Initiative, led by the Children’s Institute in partnership with The Ford Family Foundation.

To collect additional information about P3 activities, we conducted interviews with Hub and other P3 staff. This information was used to identify programs that were: (1) primarily targeted at improving child and family school readiness; (2) included a multi-session format (as opposed to one-time workshops or events); and (3) were implemented at, or in partnership with, elementary schools. For each of these programs, we then created indicators to describe the structure, intensity, target population, and level of evidence<sup>ii</sup> of each program.

We then identified matched “comparison schools” that were not implementing (to the best of our knowledge) P3-funded activities<sup>iii</sup>. Ultimately, we identified 233 P3 schools and 148 demographically matched comparison schools from a dataset of 781 schools provided by Oregon Department of Education.

## What types of P3 activities are being implemented?

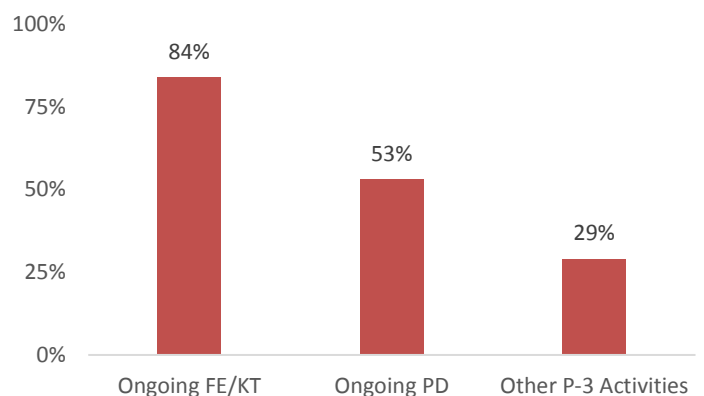
Most P3 activities focused on ongoing family engagement and kindergarten transition (FE/KT), with 84% of P3 schools implementing at least one ongoing (multi-session) FE/KT program. About half (53%) of P3- schools implemented some form of P3 professional development, and almost a third (29%) of P3 schools implemented some other type of P3 activity (e.g., one time events, family fun nights). Most P3 schools had implemented these programs for just one (54%) or two (24%) years.

**The large majority (80%) of ongoing FE/KT programs were focused specifically on the transition to kindergarten.** The most frequently implemented programs were:

- Ready! For Kindergarten (R4K)
- Kids in Transition to School (KITS)
- Kinder Camps
- Play & Learn Groups

Of the kindergarten transition focused programs, about two-thirds (62%) utilized a structured curriculum and over half (55%) were evidence-informed or evidence based. Thus, 45% of ongoing FE/KT programs did not have data supporting their effectiveness. Local communities were given considerable latitude in identifying and/or developing strategies that they believed would be appropriate given local contexts.

Figure 1. Percent of P3 funded schools with different types of P3 activities.



## Are P3 funds being invested in schools that serve more children who are more likely to lack key school readiness opportunities?

To address this question, we compared demographic characteristics of 233 P3 schools to the remaining schools in Oregon not engaging in P3 work (n=557). Results showed that P3 schools were significantly more likely to have a larger percentage economically disadvantaged students, English Language Learners, and Hispanic/Latino children, all groups known to have less access to early learning opportunities. P3 schools were substantially more likely to serve low-income children, with P3 schools having over half (55%) economically disadvantaged students compared to 45% in non-P3 schools, on average. P3 schools were also more likely to enroll students who are English Language Learners (18% of students vs. 11%) and/or of Latino heritage (26% of students in P3 schools vs. 17% in non-P3 schools). **This suggests that P3 investments are being made in a way that prioritizes services for children and families who are more likely to be in need of supports for improving school readiness.**

### Where are investments being made?

P3 funds are being used in schools with larger proportions of students who are:

- Economically disadvantaged
- Latino
- English Language Learners

These groups of children are known to have less access to early learning opportunities.

## Do OKA scores differ between P3 funded elementary schools and matched comparison elementary schools in Oregon?

### Difference in OKA Scores?

After controlling for demographics, **students in P3 schools knew more letters and letter sounds** compared to students in non-P3 schools.

While the increase was small, it was statistically significant.

P3 work in most Oregon communities is in the very early stages of implementation, and much of the work has focused on “first steps” towards engaging families in effective supports for early learning. Further, not all P3 work is intended to directly impact children’s school readiness skills that are measured by the Oregon Kindergarten Assessment (OKA). Nonetheless, the collective impact of P3 work is meant to improve school readiness outcomes over the long term, including but not limited to, aspects of readiness that are captured in the OKA. Thus, the P3 Implementation and Outcomes database can begin to provide snapshots related to whether and how children in P3 schools are doing on the OKA. This year, we compared OKA scores for incoming kindergarten students relative to children in matched comparison schools. **Results<sup>iv</sup> suggested that incoming kindergartners in P3 schools were somewhat more prepared for school in terms of early literacy compared to children in**

**matched schools that were not implementing P3 activities.** Specifically, after controlling for demographic differences and earlier school-level OKA scores, students in P3 schools in 2016 knew significantly more letters and letter sounds compared to students at non-P3 schools, although the size of these differences were quite small. There were no significant differences found in early numeracy skills or teacher-rated social-emotional skills of kindergartners in P3 and comparison schools.

## Conclusions, Limitations, & Next Steps

Results from building the P3 database and analyzing P3 implementation and outcomes data highlight important aspects of Oregon’s P3 work to date. **First, data supports the notion that P3 funds are being used to support the statewide goal of reducing disparities in kindergarten readiness for those furthest from**

**opportunity.** P3 funds are being used to support schools with larger proportions of economically disadvantaged students, Latino children, and children who are English Language Learners.

**Results also found early evidence that school-based P3 work may be starting to “move the dial” towards improved school readiness at the community level.** In particular, small but statistically significant or near-significant trends were found when comparing OKA scores for P3 schools versus matched comparison schools in Oregon.

**These findings, although small in magnitude, are encouraging.** First, given the many influences on population-level outcomes (in this case, all students within a school) such outcomes are typically very slow to change. Second, the measures used to assess P3 implementation are, at this point, somewhat imprecise and no doubt underestimate the level of activity going on within both P3 schools and those identified as comparison schools. **As schools continue to implement a greater number of and more intensive P3 strategies, the collective impact of P3 activities at the school-level may become stronger.**

Results also point to areas of improvement for P3 work. First, these finding suggest that the overall level of P3 implementation remains somewhat low. Most programs were relatively low intensity (small number of sessions and hours of programming), and many programs were not evidence-informed or evidence-based. **Focusing P3 investments on programs shown to have documented effects on school readiness are likely to be important to strengthening school-level impacts.**

Oregon’s P3 evaluation system could also improve the amount and quality of P3 data that is collected and available for research and evaluation. Much of the information collected about P3 implementation for this project was gathered retrospectively through interviews and document reviews, rather than through systematic tracking of program delivery and participation. Ideally, individual-level (family and/or child) participation in P3 activities designed to directly impact school readiness skills could be tracked and directly linked to student OKA scores. P3 data could also be used to intentionally study and build the evidence base for locally developed and/or culturally specific P3 activities that may reflect important innovations in practice. Increasing infrastructure for basic data collection and reporting across the P3 sites, and in particular, for the Early Learning Hubs, would significantly improve the quality of implementation data available for analysis.

### Next Steps

Track and link individual-level participation in P3 activities to student OKA scores.

Study and build the evidence base for locally developed and/or culturally specific P3 activities.

Increase infrastructure for data collection across the P3 sites to improve the quality of data

<sup>i</sup> Ensminger, M. E., & Slusarcick, A. L. (1992). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of education*, 95-113.

<sup>ii</sup> Programs were rated in terms of the level of evidence for effectiveness using a review of the evidence base for Family Engagement and Kindergarten Transition programs (the High Impact Strategies<sup>ii</sup> guides). Each ongoing, multi-session FE/KT activity was given a rating of 0 (not based on any research); 1 (some preliminary or less rigorous evidence); or 2 (strong, more rigorous research evidence).

<sup>iii</sup> ODE utilized four demographic variables to calculate school matches: (1) the percentage of students economically disadvantaged; (2) the percentage of students identified as (ever) English Language Learners (ELL); (3) the percentage of students identified as a member of an underserved racial/ethnic group (i.e., all students of color with the exception of students from Asian backgrounds); and (4) the percentage of students identified as mobile during the school year.

<sup>iv</sup> Multi-level models (HLM, Bryk & Raudenbush, 2002) were used to compare student level OKA scores adjusting for school-level clustering and demographic characteristics. School level covariates included schools’ prior average OKA scores (2013 through 2015), geographic location (urban, town, rural), whether or not the school had a co-located preschool, the percentage of students receiving Free and Reduced meals, the percentage of English Language Learners, and the percentage of children receiving Special Education Services. Student level demographic controls were gender and race/ethnicity.