



Hawai'i  
State Public  
Charter School  
Commission

# Kindergarten Assessment Data: Impact of PDG on Kindergarten Readiness School Year 2016-17

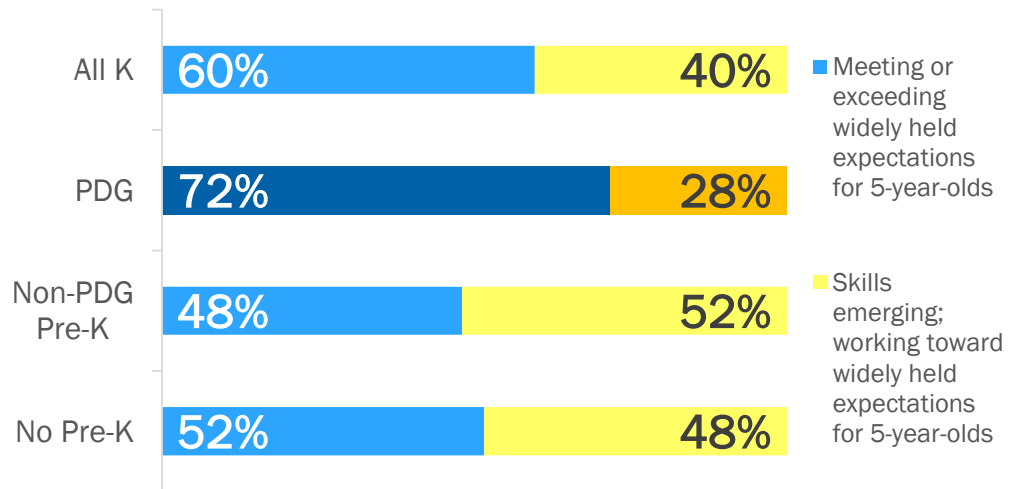
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## Pilot Kindergarten Assessment Program

In school year 2016-2017, the Hawai'i State Public Charter School Commission piloted a small-scale kindergarten assessment program using data provided by three charter schools in its Preschool Development Grant (PDG): Ka 'Umeke Kā'eo, Ke Kula 'o Nāwahīokalani'ōpu'u Iki Laboratory Public Charter School, and Nā Wai Ola Public Charter School.

The purpose of this pilot was to look at the achievement levels for **all kindergarteners** at PDG schools in three key subject areas – math, literacy, and social emotional development – and then to compare the performance of students who: 1) **attended PDG programs**, 2) **attended other pre-K programs**, and 3) **had no pre-K experience**.

### PDG Pre-K Helps Students to Achieve in Math



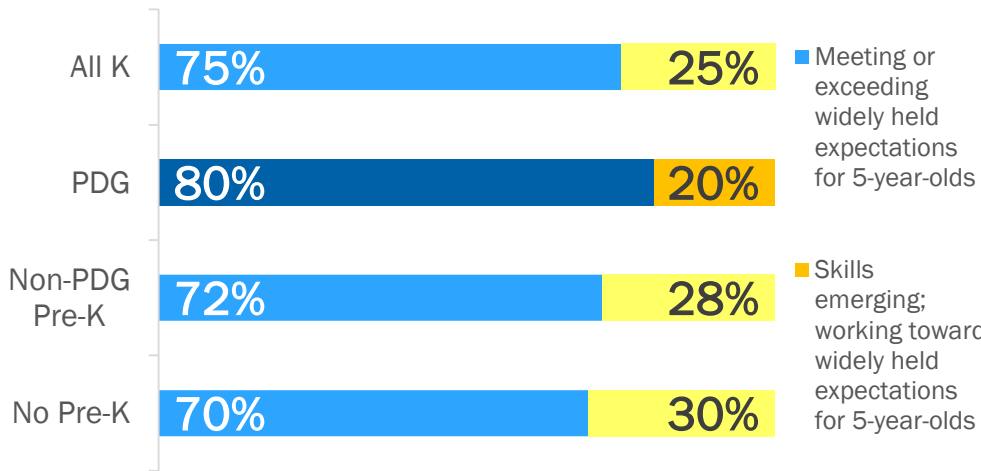
**S**tudents who attended PDG pre-K programs had stronger math performance in kindergarten than any of the comparison groups: nearly three-quarters of PDG graduates met or exceeded math expectations for 5-year-olds, compared with only about half of those who attended either non-PDG pre-K or who had no pre-K experience.

*This suggests that preschool attendance alone may not be sufficient to prepare students for kindergarten-level math, but that the quality of a pre-K program may be an important factor in numeracy development.*

**What is Early Mathematics?** It is a lot more than numbers and counting. Meaningful early numeracy experiences use language and conversations to solve problems, commonly referred to as “word problems.” Early mathematics includes measurement, geometry, spatial awareness, comparison, and patterning, and also incorporates multiple developmental areas, particularly language, literacy, and social emotional development.



**The development of early math skills is a significant predictor of later academic achievement (Duncan, et al, 2007).**



**PDG Pre-K Students Demonstrate Strong Literacy Skills**

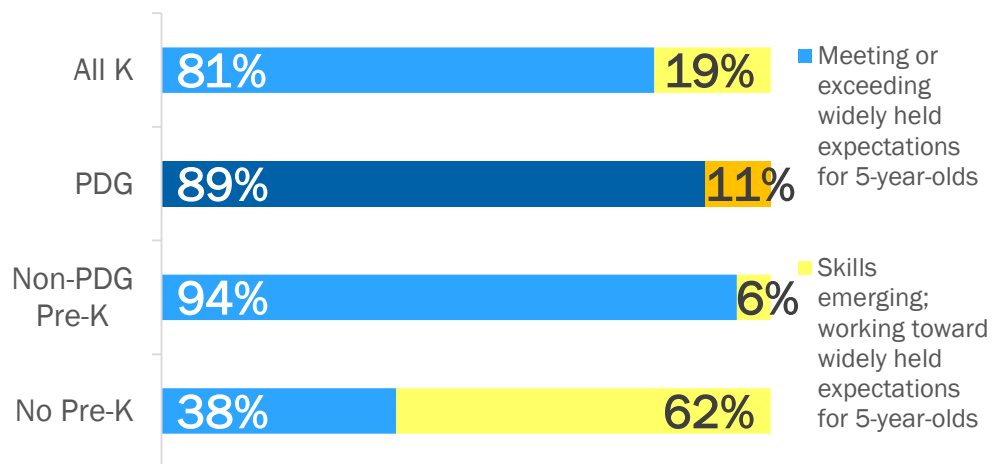


Reading proficiency by third grade is considered a “make it or break it” benchmark (Shrier, 2013).

Literacy skills across all groups were fairly consistent, but PDG graduates were the highest performers, with 80% meeting or exceeding the literacy expectations for kindergarteners.

**What is Reading Readiness?** Also referred to as “emergent literacy development,” it is a child’s acquisition of the skills that form the building blocks of conventional reading. These skills are enhanced by regular preschool activities such as being read to, telling stories, and singing together, which lead to building a larger vocabulary and tie in closely with language development. Literacy development in early childhood is critical and encourages other important related skills, like emergent writing and inventive spelling.

**Pre-K Experiences Support Social Emotional Development**



All preschool attendees had similarly high social emotional skill levels, with at least 89% meeting or exceeding the developmental benchmarks for kindergarteners. For the majority of students with no pre-K experience, however, those skills were only emerging.

*This suggests that students’ social emotional development greatly benefits from participation in preschool.*

**What is Social Emotional Development?** It is a child’s ability to self-regulate emotion and behaviors, and is fostered by a climate of caring and cooperation. It is arguably the most important developmental skill, as it provides the foundation for participating in learning, working with others, and building positive relationships with peers and adults.

