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Educating Children, Inspiring Our Future

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Promoting Child Outcomes through Continuous Quality Improvement

Implementing SEEDS of Learning at Kidango

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Executive Summary

- Kidango serves 4,000 low-income children in state preschool, Early Head Start, Head Start, mental health and early intervention programs each year. We are committed to improving outcomes for all children and believe that with the right support, each child can be a successful reader by third grade – an important predictor of timely high school graduation and college attendance.
- We adopted a philosophy of continuous quality improvement driven by the imperative to boost child outcomes. This approach emphasizes predictive skills, research-based curriculum, coaching, monitoring child outcomes, and evaluation as key components of a virtuous cycle aimed at maximizing the impacts of our programs.
- SEEDS of Learning is a relationship-based professional development and coaching program for teachers of young children, with a focus on oral language and literacy. It has been part of the Minnesota Reading Corps where it has significantly improved emergent literacy assessment scores for 3-5 year olds.
- Our interest in SEEDS, with a pilot cohort being trained in 2016, generated interest from NORC at the University of Chicago and the Rainin Foundation in Oakland. We collaborated in a randomized controlled trial study of SEEDS and its effects on children's language skills in five key areas: alliteration, letter naming, letter sounds, rhyming, and vocabulary.
- To be successful in our implementation of SEEDS, we recognized that we needed to accomplish a cultural shift that would place data-informed coaching at its heart. We took a structured approach, with consideration for the training process, funding, people and relationships, training materials, environment, and management as the core components of a coaching culture.
- Successes and challenges were experienced in each area. The most challenging task was reconstituting the interpersonal dynamics between coaches and coachees, who were formerly better acquainted with a supervisory mode of interaction. This was necessary because Kidango did not have the funds to hire a large team of coaches; center directors and lead teachers who supervised teachers and aides had to become coaches. By establishing trust, promoting staff wellness, providing ongoing training and administrative support, and setting clear expectations we were able to gradually alter our collective mindset. This was an important necessary condition for SEEDS to be successful.
- Appropriate use of valid, relevant data was emphasized with a powerful mantra: 'data is a flashlight, not a hammer'.
- The results from the second year of the NORC study show impacts of a magnitude similar to up to 8 months of early childhood growth. Positive outcomes were seen for children in all racial/ethnic subgroups as well as for dual language learners. These results are comparable to some of the most recognized pre-K programs in the nation, such as Tulsa, Boston, and Georgia.
- Kidango's experience with SEEDS demonstrates how it is possible, through a relentless commitment to improving child outcomes, to accomplish meaningful change in a large early learning system, and deliver high-quality opportunities for all children.

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Acknowledgements

We would like to thank Kate Horst, author of SEEDS of Learning, for her invaluable partnership over the past several years. Her innovative spirit is what has made SEEDS possible and we are fortunate to have benefited from her and her team's guidance and support. To find out more about Kate and her organization – CARES for Learning, the home of SEEDS – please visit: www.seeds-learning.com

We would also like to thank the research team at NORC at the University of Chicago, particularly lead researcher Marc Hernandez, and the Kenneth Rainin Foundation in Oakland, specifically Shaheena Khan from their education team, for being our partners in promoting a data-driven approach to early education. It has been an honor to be part of such a rigorous study and we look forward to jointly leveraging the lessons we learned to continue to push for high-quality early learning opportunities for all children.

Finally, for all Kidango staff, families, and children: it is a great privilege to work with such dedicated staff, beautiful families, and joyful, talented children. Thank you.

Introduction

The benefits of high-quality early childhood education (ECE) are widely acknowledged, but the question of how to identify, implement and scale practices that will improve quality and lead to better child outcomes remains subject to debate. Kidango has placed this question at the core of its existence.

We are the largest early learning organization in the San Francisco Bay Area, with over 50 centers serving infants, toddlers, and preschoolers in state preschool, Head Start and Early Head Start programs. To make a meaningful difference in the lives of the families and children in our care, the vast majority of whom are from underprivileged communities (as discussed below), we recognize that we must identify, measure and deliver high-quality programs focused on those areas that matter most for children's development. Our approach emphasizes research, data and continuous learning as vital pathways to being able to deliver on the promises of ECE. We are convinced that with the right support, each and every child can be a proficient reader by third grade – one of the strongest predictors of future academic success.[1]

Inspired by this vision, in 2016 we began implementing *SEEDS of Learning* to boost our children's language and literacy skills. SEEDS is a relationship-based professional development and coaching program that has produced impressive outcomes in Minnesota. There, it was found that SEEDS contributed to significantly improved emergent literacy assessment scores.[2] We were hopeful that these results could be replicated at Kidango.

Fortuitously, our interest in SEEDS drew attention from NORC at the University of Chicago. This led to a deep collaboration between NORC and Kidango in the form of a Randomized Controlled Trial (RCT), focused on the impacts of SEEDS on child outcomes in oral language and literacy. In this paper we describe the critical steps we took in refining a continuous quality improvement system as we implemented SEEDS. Bolstered by the data obtained through the RCT, which found statistically significant effects of a magnitude similar to up to 8 months of early childhood growth, our ambition is to provide a case study that helps, from a provider's perspective, to shed light on the critical question of what can be done to move the needle on child outcomes. It is our hope that this will contribute to a better understanding of how ECE can offer the best possible opportunities for all children by leveraging quality improvement strategies supported by data, coaching and professional development.

About Kidango

Kidango is a leading early learning organization, serving 4,000 low-income children in the San Francisco Bay Area. We empower human potential to create a loving, compassionate and equitable world. We do this by preparing the youngest, most vulnerable children for success in school and life, while enabling their parents to go to work and support their children's learning at home. We work at the nexus of practice, policy and research, which allows us to bring innovation to scale, so that what we learn from transforming one child's life can be offered to countless more. Through partnerships with leading research institutions and a data-driven approach to continuous quality improvement, we measure outcomes as part of perfecting our practice. Yet the heart of our work is building meaningful relationships that transform trauma to triumph, oppression to opportunity, and poverty to power. Kidango's work has been highlighted in the New York Times, PBS Newshour, NBC News, the Hechinger Report, New America and Ed Source, among others.

Since our founding in 1979 in Fremont, we have grown to be the largest early learning organization in Northern California, serving primarily San Jose and the East Bay area with 55 centers and over 700 staff. In addition to our state preschool, Early Head Start and Head Start programs Kidango offers mental health and early intervention services for young children throughout the Bay Area, and prepares over 6,000 nutritious and delicious meals each day.

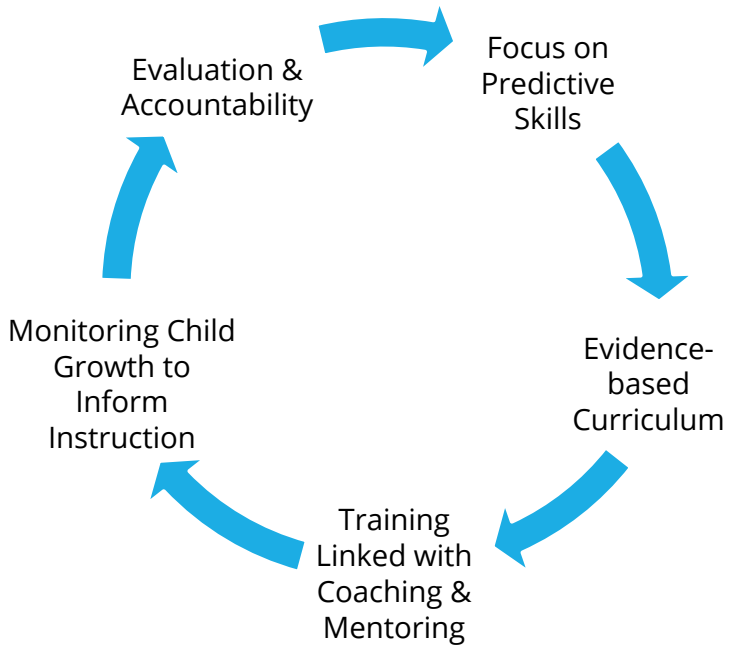
Our children and families are reflective of the diversity of our community.[3] 60% of our families identify as Latinx, mirroring how Latinx children have been a majority in California's public school system since the 2009-10 school year.[4] This population is also the most socioeconomically disadvantaged student group in California, with 79% of Latinx children identified as low-income (vs. 75% of African American and 31% Caucasian).[5] A further 20% of Kidango families identify as Asian and 10% as African American – with the remaining 10% being Caucasian (6%), Native Hawaiian or other Pacific Islander (3%), and Other (1%).

As a provider of federal and state-subsidized programs, a large majority of Kidango families are low-income (97%), with an overall median income of $2,701 per month in the 2019-20 school year. Crucially, this falls below the $2,850 that has been estimated to be needed for a family of four to meet basic needs in our region.[6] Given how differences in cognitive development between children from low-income families and more affluent households can be seen as early as 9 months of age – often growing over time into a 'school readiness gap'[7] – a significant motivator for Kidango is to offer a high quality early learning experience that will act as an equalizer and set children up for future success.

Continuous Quality Improvement and SEEDS

Kidango strongly believes that every child has the ability to be a successful reader by third grade, which is the year when children are expected to switch from 'learning to read' to 'reading to learn'. Research indicates that third grade reading proficiency is a significant predictor of both high school graduation and college attendance: a student who is unable to read on grade level by third grade is four times less likely to graduate by age 19. If this student is also poor, they are 13 times less likely to graduate on time than a proficient reader with no experience of poverty.[8] With a student population consisting almost entirely of low-income children, about 40% of whom are dual language learners, Kidango thus has a powerful imperative to promote oral language and literacy skills.

We embraced a philosophy of continuous quality improvement to enable us to recognize and reinforce effective practices. In full, the cycle looks as follows:



To guide an evidence-based approach to language instruction, SEEDS emerged as a highly promising option. SEEDS is a Response to Intervention (RTI) model that has been an integral part of the Minnesota Reading Corps: the largest AmeriCorps tutoring program in the nation, with the overarching goal of promoting reading proficiency so that children are successful readers by third grade.[9] In 2015, the Minnesota Reading Corps was evaluated by NORC at the University of Chicago with a rigorous quasi-experimental design study.[10] This evaluation found statistically significant effects for four and five year olds in all five of the critical emergent literacy skills that were assessed (see below), with effect sizes ranging from 0.40 to 0.72. This represents an advantage of approximately 3-6 months of growth for children who were served by the Reading Corps.[11]

As a core component of the Minnesota Reading Corps, SEEDS has provided the pedagogical framework in which its teachers are trained to provide a literacy rich environment. It is grounded in five specific guiding principles:

- Sensitivity: Look, listen, and ask questions to become aware of each child's needs, thoughts, abilities and feelings;
- Encouragement: Use intentional affirmations and positive non-verbal communication to create a shared positive learning environment;
- Education: Embed the 'Big 5' literacy skills in daily routines (the Big 5 are: vocabulary, conversation, phonological awareness, book and print rules, and letter knowledge);
- Development of Skills Through Doing: Help children explore their world through hands-on learning; and
- Self-Image Support: Balance the SEEDS quality interactions to support a child's feeling of being respected and capable.[12]

Together, these principles drive high quality interactions between teachers and children. SEEDS is strongly relationship-based, with an interactive focus on each child's individual skills. This outlook is carried through in a train-the-trainer, coaching-based model of professional development that is of crucial importance for successful implementation of SEEDS (below we describe in more detail how this was put into practice at Kidango). In this model, coaching is informed by data about children's development, allowing teachers to come to a closer understanding of how they can tailor their instructional strategies to the needs of the children in their classroom. This reveals how SEEDS aligns closely with our vision of continuous quality improvement, placing great emphasis on data-sensitive coaching to reinforce successful classroom practices.

A Data-Driven Approach

Using child outcome data to inform instruction is a critical success factor in continuous quality improvement. In the beginning of our SEEDS adoption, some teachers in our fall 2016 pilot cohort were hesitant to assess children three times a year (see below), believing that this would lead to a 'drill and kill' instructional approach. We took time to work with teachers until they felt comfortable using the assessment and saw how it could help them tailor instruction for each child and best meet their needs. We embraced the mantra 'data is a flashlight, not a hammer' to ensure teachers knew this was a tool to help them improve rather than to penalize. As teachers became more comfortable with the RTI methodology of SEEDS, they found creative ways to support individual children using evidence-based interventions.

We also made time for them to conduct the assessment by eliminating administrative work. Most significant was the reduction of the state's required child assessment, the Desired Results Developmental Profile (DRDP), which through our advocacy was reduced from a 54-page assessment to 23-pages. Ultimately, though, it was seeing how far children had progressed at the end of the year that convinced our teachers. They loved finding out how far children had come and how their work made that happen.

Having our own data from the pilot was important, but to show the effectiveness of SEEDS we wanted to partner with a world class research institution to conduct a formal evaluation. Since not all aspects of the Minnesota Reading Corps are practiced at Kidango (specifically the involvement of AmeriCorps members), our implementation of SEEDS provided an excellent opportunity for NORC, with funding from the Kenneth Rainin Foundation in Oakland, to look more closely at the effects of SEEDS in a different (and in some respects more typical) context. With 1/3 of Kidango's centers already serving as a pilot implementation cohort, our remaining sites were randomly assigned treatment or control status for the school year 2017-18. Since the goal was to bring SEEDS to all Kidango classrooms, in year two of the study (2018-19) the focus shifted to assessing the effects of teachers' different experience levels with SEEDS on child outcomes as well as potential gains vs. the year one control group baselines (between and within cohorts).[13] The total number of children involved is approximately 1,000.

From our perspective as a provider, what significantly reduced the potential burden of participating in an RCT was the fact that data collection is already an essential part of SEEDS. The assessment that is typically used in SEEDS is the IGDIs (Individual Growth and Development Indicators), assessing children in fall and spring (with a winter option) in five skills that are predictive of future reading proficiency. Derived from research at the Minneapolis Public Schools and the St. Croix River Education District, where the IGDIs have long been utilized at scale, the IGDIs assessment sets benchmark scores at which a child is deemed 'on track'.[14] The five skills assessed are:

- Alliteration: Children are asked to identify as many alliterative pairs as possible within two minutes (e.g. door/drive, book/bear, etc.). The benchmark score for a child to be deemed 'on track' is 8 correct answers;
- Letter Naming: One point is given for each uppercase letter correctly identified within a one minute timeframe. The benchmark score is 14;
- Letter Sounds: Students are asked to identify as many lowercase letter sounds as possible within one minute, with a benchmark score of 10;
- Rhyming: Assessing phonological awareness, one point is given for each pair of rhyming words correctly identified within two minutes. The benchmark is 12;
- Vocabulary: Also known as Picture Naming, in one minute children are shown pictures and are asked to identify what is depicted. To be considered 'on track' 26 correct answers are needed.

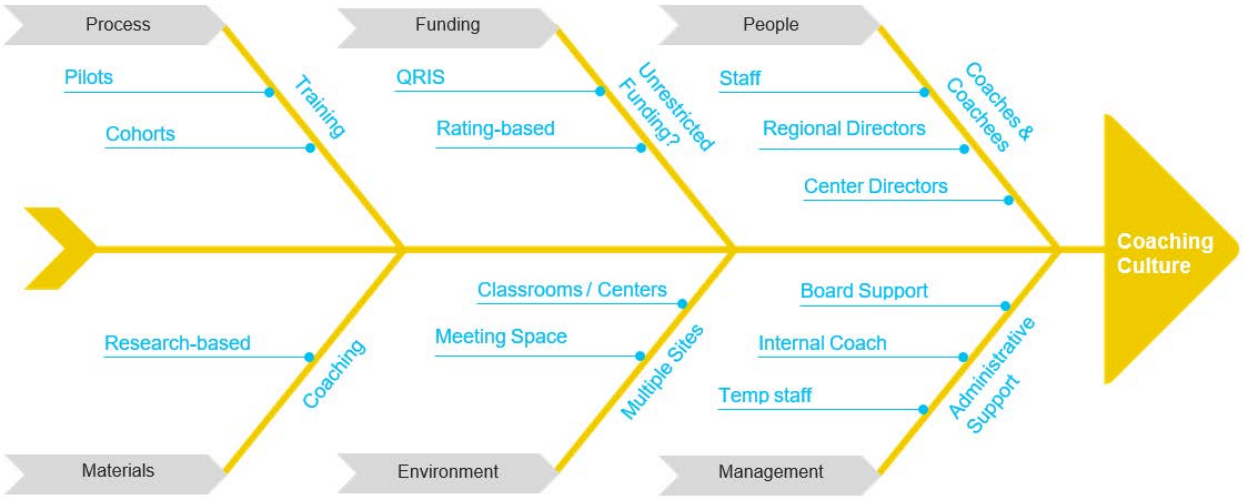
This assessment is typically conducted 1:1 between teacher and student, but in the context of the RCT, external NORC assessors came in for the fall and spring assessments. The FastBridge assessment was also used for alphabet knowledge. For the treatment group, the outcomes were shared with teachers afterwards. Using external assessors helped ensure the validity and reliability of the data.

Building a Culture of Coaching

With over 50 centers and more than 400 teachers, it was important for us to take a structured approach to training our teachers on SEEDS. The first Kidango staff to receive SEEDS training was a pilot cohort in 2016. To ensure the trainings would stick with teachers and change classroom instruction, instituting ongoing coaching was key. One problem, though, was that we could not afford to hire a coach for every teacher; the solution was to train every teacher's supervisor to be their coach.

So, consistent with the SEEDS methodology, we aimed to shift our internal culture from one of *supervision* towards one of *coaching*. In other words: we were looking to fundamentally reconstitute the mode of interaction between hierarchically distinct groups of staff, e.g. site supervisors (center directors) and teachers. Recognizing that our teachers each have their own perspectives, experiences and motivations, and that these can act as a vital resource for learning, we define coaching as: "unlocking a person's potential to maximize their own performance. It is helping them to learn rather than teaching them."[15] Another way to view this relationship is as a "dialectic process that integrates experiences, concepts and observations to facilitate understanding, provide direction, and support action and integration."[16] It is clear that this represents a much different way for teachers to think, plan and act than a more traditional model in which a supervisor plays a prescriptive role, which had previously been the norm at Kidango. We believe that the positive outcomes seen in the RCT are in substantial part due to a culture of coaching taking root. That is to say: cultural realignment towards coaching has been a *sine qua non* (necessary but not sufficient condition) for successful quality improvement at Kidango.

We drew on the concept of improvement science, with emphasis on small cycles of inquiry and learning, to address the challenges and successes of the pilot cohort. We further employed the 'fishbone method' to help us move forward, though with a slight twist in that our envisioned outcome (rather than a specific problem, as is often the case) forms the 'head' of the fish:



Filling out this diagram helped visualize the various constitutive elements of a coaching culture. This immediately clarifies how the process of training is but one of many important aspects, and that it was necessary to address a multitude of factors at different levels of our organization to reach the desired goal.

With reference to the diagram, materials and funding were perhaps the most straightforward to address. SEEDS provided all the materials needed for training, teaching, and coaching. We developed a training budget, using our state contract and federal program quality improvement funds (tied to QRIS ratings) to cover costs associated with training, including materials, meals, consultation fees, staff stipends, etc. In the interest of scalability, our goal was to work with existing funding streams, available to most other state preschool and Head Start providers, so that the model could be replicated elsewhere. Environment and process, in turn, proved to be somewhat dynamic factors, and we have made several adjustments to our original plan along the way. An example of this, as it relates to the environment, can be found in meeting spaces for trainings. Having access to a large training room in our administrative office is a benefit, but we found that there is a 'sweet spot' in terms of the number of participants that allows for active participation. This is why we decided on a group size limit of 50 staff; increasing opportunities for interaction, but requiring a higher overall number of trainings.

Consistent with the 'train-the-trainer' approach embedded in SEEDS, in the summer prior to our training season (beginning of the school year) several regional directors (who each oversee a cluster of centers and directly supervise center directors) participate in our 'Training of the Trainers institute'. Regional directors are paired up into training teams of two, with alternating training months. They then have regular check-ins and receive coaching on their understanding and delivery of the content from an external SEEDS coach. The top-down system that was thus created, enables the regional directors to be trainers/coaches to the center directors and in their region, and ensures scalability across a large number of centers.

It is highly encouraged that classroom teaching teams attend the training together so that they are able to take advantage of discussion and planning time as a team. If a participant cannot make a certain night, they can have a second opportunity to do so as a training calendar is communicated to all participants. Given the large number of staff receiving training we set up a tracking system to be able to note attendance. We also created a participant agreement signed by all staff that explains the SEEDS training and the expectations of them at the beginning of the training season. If any training session is missed, that staff will automatically be enrolled in the same session for the next round of training. Additionally, building on our experience with the pilot cohort, we decided to assign an internal trainer dedicated to data collection so that we can ensure the reliability and fidelity of any data collected to be used in coaching.

I believed in the teacher's ability to move forward and believed in a positive outcome. I remembered to be sensitive to their thoughts and feelings. I set a goal for myself and implemented [the program] by being consistent in my coaching sessions and individual coaching meetings.

– Dolly Gurpinder, Center Director and Site Coach

The most challenging aspects of shifting to a coaching culture had to do with people and management. Regional directors became 'master coaches' to center directors, who in turn became 'site coaches' to the teachers in their center. As a new (and unfamiliar) model, there were some initial concerns about how supervisory and coaching responsibilities could be combined. We responded by providing thorough coaching training for the center and regional directors and by setting clear distinctions and expectations for coaching vs. supervision. A goal setting book was instituted to help track coaching and SEEDS implementation efforts, accompanied by an online tracker to record the content and outcomes of coaching sessions. In addition we created monthly professional learning communities, providing space to share coaching successes and challenges and review and further develop practices. These communities have proven to be especially helpful prior to and immediately following an assessment period, giving teachers room to discuss how to use the data to gain a better understanding of past instruction as well as how to develop action steps and goals before the next assessment period. As mentioned previously, while some teachers were initially uncertain about using young children's assessment data, the mantra that 'data is a flashlight, not a hammer' was found to be reassuring. But it was crucial to continuously emphasize this point and to send a consistent message from senior leadership down to allay any potential hesitations.

Finally, this brings into focus the role of management and the administrative supports created to sustain the program. Kidango has an internal pool of temp staff, as well as regional floaters, and the mobilization of this group has been key in creating time for professional development. What is more, the process of cultural change requires a great deal of trust between management and staff. Consistent messaging, follow-through and an honest focus on staff morale were essential in retaining focus and direction. Several staff surveys were undertaken since 2016, and in response to our findings great efforts were made to reduce administrative and other

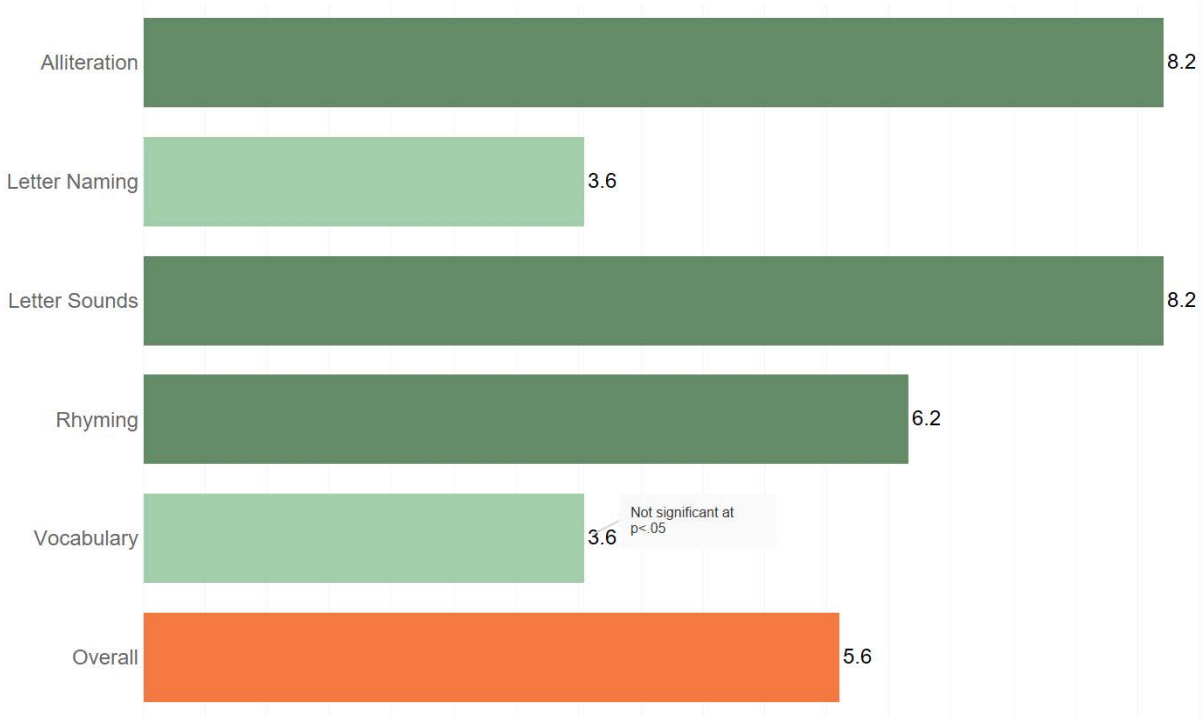
responsibilities that would otherwise drain teachers' time, such as the DRDP (as mentioned above) – research has pointed to such obstacles as significant factors affecting collective sentiments.[17] Another initiative that has notably boosted morale is an annual staff wellness day, with workshops, team building and personal care activities for all Kidango employees. We continue to be sensitive to staff concerns and strive to create the best possible teaching environment.

Teacher compensation matters too. From 2016 to 2020, Kidango's teacher salaries were increased by over 45%. Benefits were increased as well, including more holidays and vacation time. By raising morale and compensation, Kidango reduced teacher turnover from 28% in 2015 to 12% in 2019. This was critical in the successful implementation of SEEDS, as it is difficult to improve quality without stability and staff retention.

Outcomes

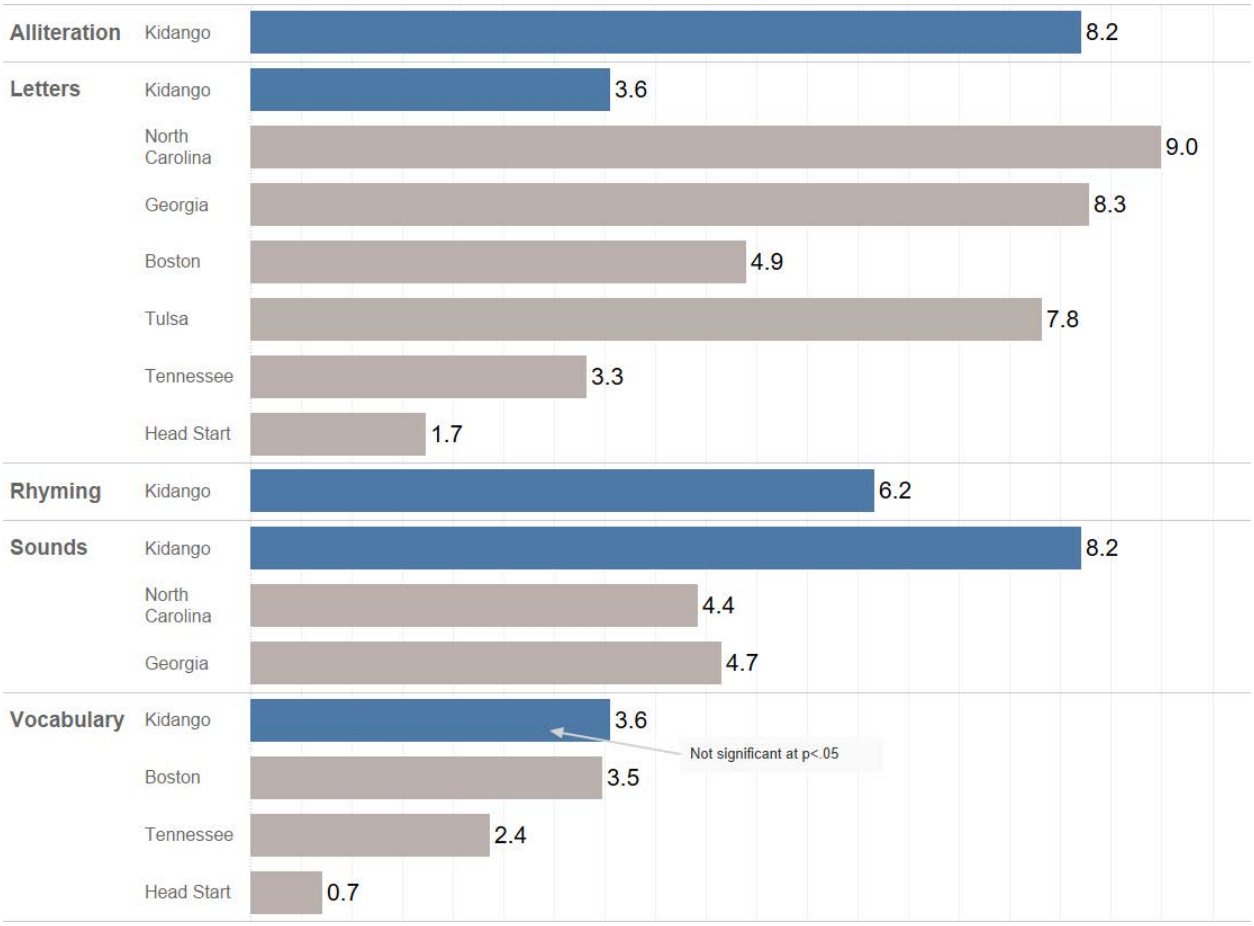
Kidango's experience with SEEDS resonates with the consistent finding in the literature that "student achievement increases substantially in schools with collaborative work cultures fostering a professional learning community among teachers and others, focus continuously on improving instructional practice in light of student performance data, and link to standards and staff development support."[18] By focusing and continuously refining each of the elements identified in our fishbone diagram, with the support and guidance of external SEEDS trainers, we have been able to gradually transition collective beliefs and practices towards trust and collaboration in the service of continuous quality improvement.

The outcomes of the RCT are discussed in more detail elsewhere,[19] but it is worth noting some of the key findings here. Focusing on our final cohort of SEEDS classrooms, which best represent current practice in light of the evolution of our coaching model since we started in 2016, the impacts (in terms of months of early childhood growth advantage vs. the control group) for 4 year olds enrolled in 2018-19 are as follows[20]:



Statistically significant positive impacts were found in four out of five areas assessed, with effect sizes ranging from 0.45 to 1.04. The cumulative benefit (weighted by margin of error) vs. the control group is equivalent to almost six months of learning, and it is important to highlight that this result was accomplished in just nine months (the period between fall and spring assessment).

These outcomes are comparable to several other, well-regarded evaluations. While it is difficult to make a direct comparison due methodological differences, a good impression can be given by looking at effect sizes for similar skills. For example, effect sizes for language skills in Boston's pre-K program were between 0.44 and 0.62.[21] Other programs, including Head Start,[22] Tennessee,[23] Tulsa[24], North Carolina[25] and Georgia,[26] have recorded effect sizes for language and literacy between 0.09 and 1.20. Using the same method as above, we can draw on these numbers to estimate the learning gains in terms of months:



In light of our diverse population of families as well as the racial, ethnic and socioeconomic disparities that persist in Kindergarten readiness,[27] comprehensive subgroup analysis was also undertaken to signal any potential inequities in how children benefit from the program. Statistically significant effect sizes included 0.82 in letter sounds for African American children and 0.89 for rhyming with dual language learners. Overall the effects appear as fairly distributed without any particular subgroup disproportionately left behind. We will continue to draw on the data to drive equitable quality improvement.

Conclusion

Since 2016, many lessons, big and small, were learned on how to create and nurture a culture of continuous quality improvement. While each of the steps we took contributed to improving child outcomes, perhaps the most important shift was that in our collective mindset: centering child outcomes in an environment of trust and collaboration. With commitment to this approach, we believe it is truly possible to close the school readiness gap and ensure the success of every child.

Notes

[1] Lesnick, J., Goerge, R., Smithgall, C. & Gwynne, J. (2010) *Reading on Grade Level in Third Grade: How Is It Related to High School Performance and College Enrollment? A Longitudinal Analysis of Third-Grade Students in Chicago in 1996-97 and their Educational Outcomes. A Report to the Annie E. Casey Foundation.* Available at: [https://www.aecf.org/resources/reading-on-grade-level-in-third-grade-how-is-it-related-to-high-school-perf/]

[2] Markovitz, C., Hernandez, M., Hedberg, E. & Silberglitt, B. (2015). *Outcome Evaluation of the Minnesota Reading Corps PreK Program*. NORC at the University of Chicago: Chicago, IL.

[3] The greater Bay Area is one of the nation's most diverse areas, with 60% identified as people of color. See: [https://nationalequityatlas.org/sites/default/files/Final_9_County_BayAreaProfile.pdf]

[4] Data from the California School Boards Association. Available at: [https://www.csba.org/-/media/CSBA/Files/GovernanceResources/GovernanceBriefs/201810FactSheet-LatinoStudents.ashx?la=en&rev=622775fcd01341248494f7ec7a6206d6]

[5] California Department of Education, see: [https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthLevels.aspx?cds=00&agglevel=state&year=2019-20&ro=y]

[6] Public Policy Institute of California, see: [https://www.ppic.org/publication/poverty-in-california/]

[7] Halle, T., Forry, N., Hair, E., Perper, K., Wandner, L., Wessel, J., & Vick, J. (2009). *Disparities in early learning and development: Lessons from the Early Childhood Longitudinal Study—Birth Cohort (ECLS-B)*. Child Trends: Washington, DC.

[8] Hernandez, D. (2011). *Double Jeopardy: How Third-Grade Reading Skills and Poverty Influence High School Graduation*. Available at: [https://eric.ed.gov/?id=ED518818]

[9] See: [https://www.nationalservice.gov/impact-our-nation/research-and-reports/impact-evaluation-minnesota-reading-corps]

[10] See note 2.

[11] This is assuming an effect size of 1.52 as the average annual gain in language skills for a child in preschool. This can then be used to calculate the scope of additional intervention. For example, an effect size of 0.72 is equivalent to 47.4% of a year (= 0.72/1.52), which is 5.7 months. We draw here from Lipsey et. al. (2012). *Translating the Statistical Representation of the Effects of Education Interventions into More Readily Interpretable Forms*. Available at: [https://ies.ed.gov/ncser/pubs/20133000/pdf/20133000.pdf]

[12] See: [https://www.seeds-learning.com/about-2]

[13] A third year was planned as well, but we were unable to collect data due to the shelter in place

orders that were in effect in the Bay Area for much of 2020.

[14] Bollman, K. (2003). *Analysis of IGDI performance in Minneapolis Public Schools and St. Croix River Education District, for target setting with 4- and 5-year old students*. Technical Data Analysis: Rush City, MN.

[15] Whitmore, J. (2009). *Coaching for Performance* (4th ed.). Nicholas Brealey Publishing: London. p. 10.

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[17] Lewis, J., Asberry, J., DeJarnett, G. & King, G. (2016). 'The Best Practices for Shaping School Culture for Instructional Leaders'. *Alabama Journal of Educational Leadership*, v3, pp. 57-63.

[18] See note 17, p. 61.

[19] See: [https://www.norc.org/Research/Projects/Pages/norc-rainin-foundation-early-childhood-collaboration.aspx]

[20] See note 11. We use the data for the within-control comparison of 2017-18 (no SEEDS) vs. 2018-19 (SEEDS).

[21] Weiland, C. & Yoshikawa, H. (2013). 'Impacts of a Prekindergarten Program on Children's Mathematics, Language, Literacy, Executive Function, and Emotional Skills'. *Child Development* 84:6, pp. 2112–30.

[22] Puma, M., Bell, S., Cook, R., Heid, C., & Lopez, M. (2005). *Head Start impact study: First year findings*. Administration for Children & Families.

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