Can Pre-K Technology Help More Kids Graduate?

Hatch Early Learning demonstrates how the use of their research-based technology iStartSmart leads to improved outcomes for children on standardized tests.

Most Children Are Not Prepared to Start Kindergarten

Schools across the U.S. are failing. **More than 30% of children do not graduate high school.** U.S. education needs a game changer—and studies show intervention in the foundational years has the most impact on child success. **Early learning technology can improve these outcomes.**

Only **ONE** out of **THREE** children enter Kindergarten prepared to learn core skills

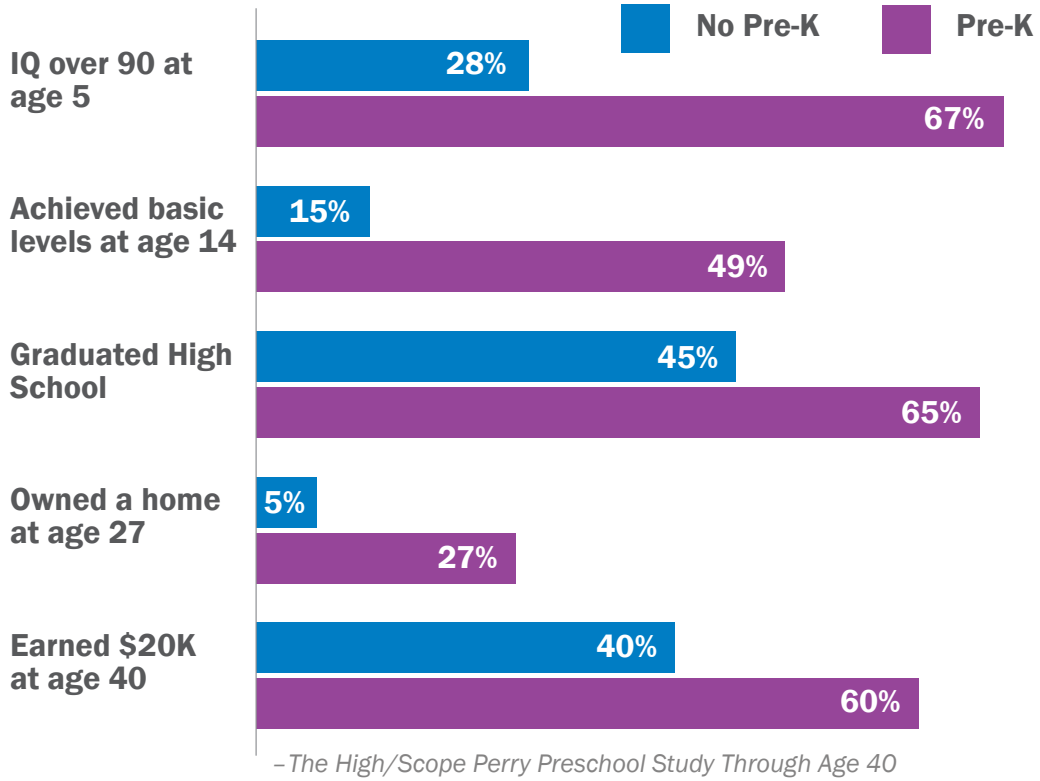
— Cunningham & Stanovich

69%

of at-risk children could not identify 10 numbers upon entering Kindergarten

— Wright, Diener & Kay

Why is School Readiness So Critical?



–The High/Scope Perry Preschool Study Through Age 40

School readiness sets children up for success in school and life. Playing catch up is difficult and starting out behind can have devastating effects. In fact, Chicago Child-Parent Center research showed that **kids who did not participate in pre-K were 70% more likely to be arrested for a violent crime by age 18.**

What Does Research Say Kids Need to Know?

Landmark research shows that children should know the following skills to be prepared to learn core concepts in kindergarten:

LITERACY/LANGUAGE

A) Say most of the alphabet rapidly
B) Name objects rapidly
C) Write name or letters
D) Remember, detect and manipulate sounds

-Developing Early Literacy, National Early Literacy Panel

MATHEMATICS

1) Count
2) Add and subtract
3) Measure
4) Identify shapes
5) Think spatially

-Mathematics Learning in Early Childhood, National Research Council

What is the Role of Technology in Early Learning Classrooms?

Combining child-directed discovery with teacher instruction to help scaffold & support children as they learn skills represents a highly effective educational environment for young children.

— Landry; NAEYC

93% of teachers say technology helps them be more effective.

— Grunwald & PBS

What is Developmentally Appropriate Technology?

A) Easy to use

B) Appropriate for non-readers

C) Meaningful context

D) Informative & positive feedback

E) Multiple opportunities for success

F) Allows for independent choice, control and access

G) Intentional focus on academic & cognitive development

H) Set in a relatable context & maintains interest

I) Includes positive social cues & is free of gender, race/ethnicity, family structure & physical capability bias

Why Are Scaffolding Techniques Important?

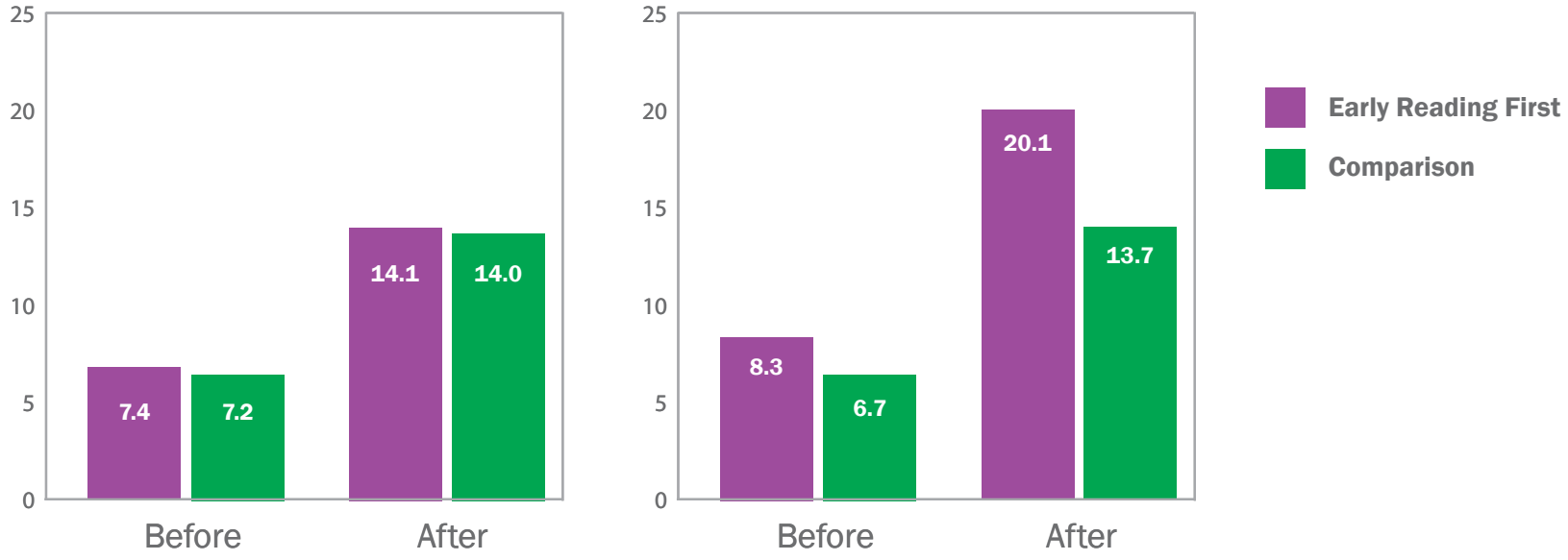
Scaffolding techniques are adapted from the Vygotskian principal of the zone of proximal development. Teachers and adaptive teaching technology work together to guide children's interactions as they master skills before moving on to more advanced concepts. Successful scaffolding techniques increase a child's responsibility for learning over time with less teacher support required.

— Bredekamp, Hatch Expert Webinar Series

How Does Progress Monitoring Impact Child Performance?

Upper Case Alphabet Scores

(Maximum Score 26)



The University of Oklahoma, Sooner T.A.L.K. (Teachers Advocating Literacy to Kids), 2002 Early Reading First Cohort, demonstrated that before progress monitoring, children showed no significant improvements in learning pre-literacy concepts, but with progress monitoring, the gains were tremendous.

Technology that Demonstrates Improved School Readiness Skills

What is iStartSmart® by Hatch®?

iStartSmart (iSS) software delivers language/literacy and math concepts based on the NELP Report and NRC-Math Report and guides children in a scaffolded, systematic manner. Progression levels range from emerging to complete in 22 skill areas in 5 skill families. Children advance to the next level only after demonstrating mastery of the content. Web-based progress monitoring allows educators to see how children are progressing at any time.

What Skills Are Developed in iStartSmart?

Phonological Awareness
- Sentence Segmenting
- Initial Sounds
- Blending Compound Words
- Segmenting Compound Words
- Onset Rime

Kindergarten Level Skills
- Deleting Onset and Rime
- Blending Sounds in Words

Language Development
- Language Vocabulary
- Spatial Skills Vocabulary
- Measurement Vocabulary

Alphabet Knowledge
- Letter Recognition

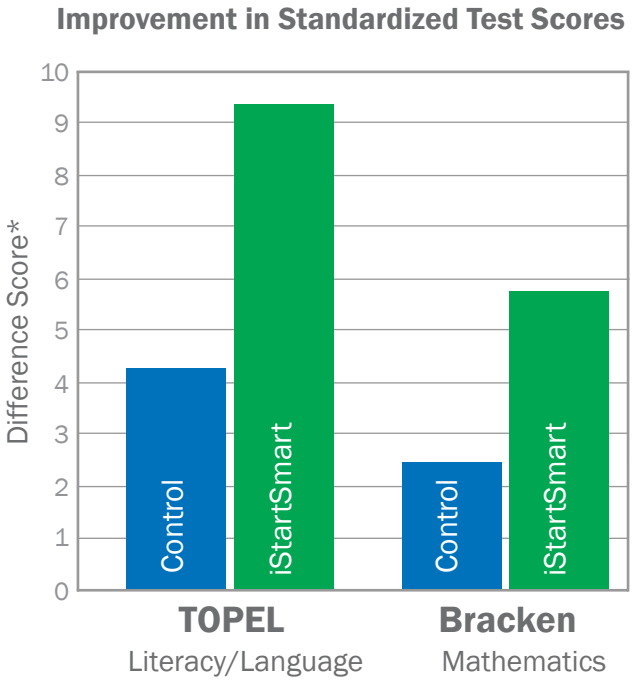
Numeric Operations
- Counting Foundations
- Numeral Recognition
- Sequence Counting
- Objects in a Set
- Addition
- Subtraction

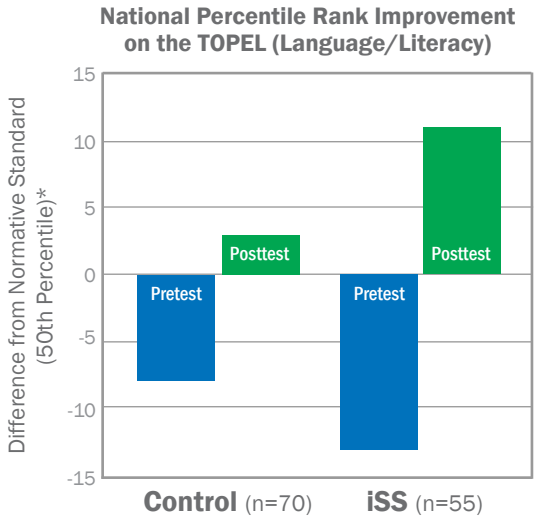
Kindergarten Level Skills
- Addition Up to Ten
- Subtraction from Ten

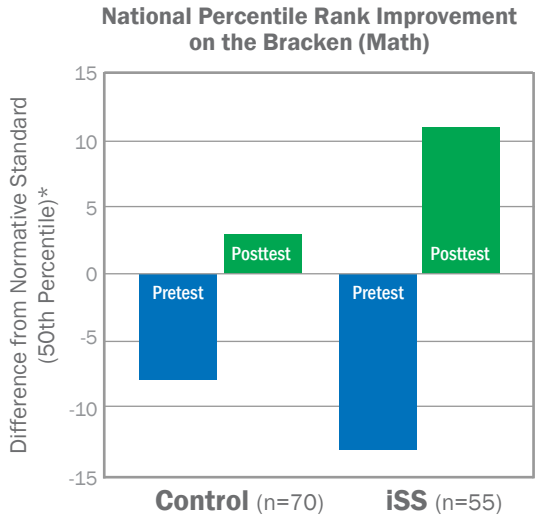
Logic & Reasoning
- Common Shapes
- Sorting
- Patterning

Research Study Results Show Improved School Readiness Skills

iStartSmart (iSS) research study results are based on nine classrooms using iSS software and nine control classrooms without iSS. Classrooms were in childcare centers serving substantial numbers of low-income children located in a major metropolitan area. After 20 educational weeks, the control group results were not significantly different than the national average on percentile rank at post-test. However, children in the iSS group were performing statistically significantly above the national average after using the technology.

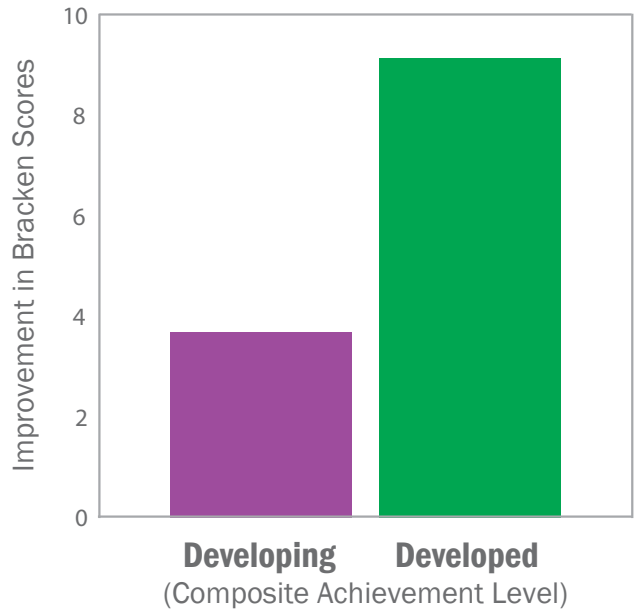






Higher Achievement in iStartSmart Results in Improved School Readiness

Improvement in School Readiness Index for Low Versus High Achievement on iStartSmart



Composite scores from children who ranked in the Developed and Developing levels in the iStartSmart group were compared on standardized measures of preschool academic skills (Test of Preschool Early Literacy-TOPEL; Bracken School Readiness Assessment, shown left). Children who had progressed to the Overall Developed level (across all skills) showed significantly more improvement from pretest to posttest on both school readiness measures compared to children who had only progressed to the Overall Developing level.

– *Hatch iStartSmart Outcomes-Based Study, Lilla Dale McManis, PhD & Mark H. McManis, PhD*

Conclusion

Children who attend quality preschool programs have a much better chance at success. If they develop essential school readiness skills prior to kindergarten, they are less likely to be involved in high-risk behaviors and more likely to graduate high school and live above poverty level. The strong correlation to success in life makes it crucial to invest in research- based educational technology that focuses on school readiness skills. **Research-based programs like iStartSmart® by Hatch that use scaffolding techniques and provide educators with real-time progress data can help significantly improve child outcomes in school and beyond.**

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For more information, Visit **www.HatchEarlyLearning.com**