

Super Why!



Reading Camp 2018

EXECUTIVE SUMMARY

During July 2018, the Early Learning Coalition (ELC) and WFSU's Education and Engagement Department provided *Super Why!* early literacy camps at five Voluntary Pre-K (VPK) sites. Through a learning approach called experiential mediation, rising kindergarteners viewed PBS KIDS *Super Why!* episodes, participated in hands-on activities and practiced various early literacy skills. The young campers were exposed to and practiced letter identification, phonics, word recognition, vocabulary, sentence reading and determination of the central idea in each of the episodes.

Across the five sites, campers' aggregated literacy knowledge grew between seven and sixteen percent. The strongest increases occurred in Isolated Word Recognition, Sentence Reading, Vocabulary, and Comprehension of the Main Idea. Notable gains were also made by individual children and VPK centers on various subtests.

BACKGROUND

The importance of early literacy learning is well established (Adams, 1990; National Association for the Education of Young Children, 1998). Children who enter kindergarten with strong oral language skills, an awareness of the concepts of print and an emerging knowledge of the alphabetic principle are much more successful as beginning readers than their counterparts who are less prepared. Students who become proficient readers in the primary years are likely to experience success in other academic areas as they journey through school. Children who come from high-needs settings often struggle with obtaining early literacy skills.

A primary purpose of the Corporation for Public Broadcasting (CPB) is to provide educational programming for high-needs children who need literacy support. With *Sesame Street* as the ground-breaker in children's media, CPB has a well-respected history and reputation of providing literacy-based television content for America's preschoolers (PBS, 2017; Jennings, Hooker & Linebarger, 2009). Through the CPB's PBS KIDS *Ready To Learn* initiative, the US Department of Education supports the development not only of educational television programs, but also funds outreach and resources designed specifically to support literacy development of preschool aged children. In addition to literacy, the current PBS KIDS *Ready To Learn* initiative highlights Science, Technology Engineering and Mathematics (STEM).

Central to the *Ready To Learn* initiative is the research-based practice of *experiential mediation* (Piotrowski, Jennings & Linebarger, 2013). Experiential mediation augments the benefits of educational television by using program content as a springboard for related, off-screen learning activities. During experiential mediation learning sessions, children view an educational television episode. Afterwards, they participate in hands on learning activities related to the episode. These activities are intentionally designed to facilitate *transfer from on-screen to off-screen applications*.

Funded by and in cooperation with the Early Learning Coalition (ELC) of the Big Bend, WFSU's Education and Engagement department has implemented the *Super Why!* summer learning camps for the past 10 years. Each year, WFSU hired personnel, provided and organized materials, training, coordination, operational support and program evaluation for the camps at ELC selected VPK centers. For the first time this summer, oversight and implementation of the program was transferred from WFSU to the ELC. As in years past, WFSU retained the coordination and oversight of the evaluation process.

BACKGROUND, CONTINUED

The 2018 *Super Why!* summer camps took place at the following Voluntary Pre-K (VPK) centers in North Florida's Big Bend area:

- Bethel Preparatory Christian Academy (Leon County)
- Kingdom Life (Leon County)
- George Munroe (Gadsden County)
- Kids First (Gadsden County)
- Happy Time (Wakulla County)

Through the use of experiential mediation (above), campers viewed *Super Why!* episodes, participated in hands-on activities and practiced early literacy skills. This document reports the results of the ELC-funded *Super Why!* camps.

SUPER WHY! TELEVISION SHOW AND SUMMER CAMP

The Show:

Super Why! is designed for a target audience of ages three through six and focuses on early reading skills. Educational content and story narrative are tightly woven together: Plots are problem-based and often revolve around classic storybook tales, featuring characters Alpha Pig, Wonder Red, Princess Presto, and Wyatt (accompanied by his dog Woofster), who use the imaginary world found in books to help solve challenges typically faced by children of this age. Each of these "Super Readers" uses a specific skill to help solve the problems they encounter, focusing on letter identification, letter sounds, rhyming, decoding, spelling, or reading comprehension.

The Camp:

Driven by what we know about effective early literacy instruction along with recommendations for educational technology for preschoolers, the *Super Why!* camp is hands-on, engaging, and addresses multiple components of early literacy (National Association for the Education of Young Children/Fred Rogers Center, 2012; National Association for the Education of Young Children, 1998). Each week of camp is focused on the letters, sounds, word families, vocabulary, word identification and sentence reading featured within three episodes of *Super Why!*: *The Three Little Pigs*, *Hansel & Gretel: A Healthy Adventure*, and *Around the World Adventure*.

Campers start each day of the week by viewing the week's episode. Throughout the day they become "Super Readers" by donning character masks, playing games, and working on crafts that reinforce the key literacy skills emphasized in that week's story. By the end of each week, the students have identified the Super Letters, planted "letter gardens," created their own dictionaries and more, all the while gaining confidence in their literacy skills.

The Teachers:

The WFSU/ELC *Super Why!* Summer Camp instructional model is unique. Even though the program is delivered in Pre-K centers, it is taught by certified kindergarten teachers. We believe there is added value when experienced teachers from the Elementary setting are embedded in the VPK learning environment: With the aim of preparing rising kindergartners for their transition to kindergarten, the *Super Why!* teacher can share instructional goals and model teaching techniques and management strategies as she works with, and in the presence of the regular VPK teacher. Likewise, the experience of guest-teaching in a VPK center can help inform the kindergarten teacher about the experiences and culture of the typical Pre-K setting from where many of her students will likely matriculate. Most importantly, we believe the children benefit from this collaborative teaching partnership as they are exposed to a wide range of kindergarten literacy activities within the context of a familiar learning environment.

Prior to the camps, WFSU Education and Engagement staff conducted a *Super Why!* training at the Early Learning Coalition. Attendees of the meeting included staff from the ELC and WFSU, reading assessors, and each of the *Super Why!* kindergarten instructors. All but one of the kindergarten teachers were returning *Super Why!* teachers from previous summers. The training included an overview of the camp's history, goals and previous successes, as well as a look at the curriculum and examples of games and learning projects. The assessment and evaluation process was also reviewed with the teachers.

PARTICIPANTS

Ninety-eight rising kindergarteners attended all or a part of the 2018 *Super Why!* Summer Camps.

VPK Center	Participants
Bethel	20
George Monroe	17
Happy Time	26
Kids First	15
Kingdom Life	20
Total	98*

*Although there may have been a few additional rising kindergarteners who attended some days of camp, this chart lists the number of participants who were present for at least one pre or post assessment across the three-week period of the program.

ASSESSMENT AND PROCEDURE

In early July, the assessment team attended a separate training meeting to prepare for data collection during the three-week camp period. Two to three assessors were assigned to collect data at each of the five centers.

To measure children's pre-existing reading knowledge and subsequent growth, we used a one-on-one pre and post assessment tool. Adapted from an earlier version provided by Out of the Blue Enterprises, the assessment is comprised of seven sub-tests based on skills embedded in the *Super Why!* episodes and the camp activities. Across the three-week curriculum, eighty-one assessment items cover a wide range of early literacy skills.

The sub-tests consist of

- Letter ID
- Letter Sounds
- Phonics
- Word Recognition
- Vocabulary
- Sentence Reading
- Comprehension of Main Idea/Theme

On Monday of each *Super Why!* week, WFSU staff pre-assessed campers individually. The pre-assessment included a sample of the skills and concepts campers would experience during the week. On the following Friday, students were assessed again to capture changes in their knowledge. Using developmentally appropriate testing materials, children pointed to and/or verbalized their responses. Interactions with the children were intentionally positive and game-like.

There are three feasibility limitations to note here: First, with 2-3 assessors per site, some campers were not able to be pulled for assessment until well after instruction began on Monday mornings. Therefore, some pre-tests do not reflect a pure base-line measure prior to curriculum exposure. Secondly, student absences clearly impact learning. Campers who were absent for two or more days during an instructional week were not included in that week’s assessment data set; however, a few of these students may have been missed due to limitations with attendance recording (we estimate fewer than 10). Even allowing for one absence during the week, post-test results were likely affected.

*A third limitation pertains to George Munroe campers only. In addition to individual absences, all students at George Munroe received only a partial exposure to the camp curriculum. First, all George Munroe summer programming was limited to Monday through Thursday. Second, a concurrently-held readiness program along with unrelated weekly events scheduled during the allotted *Super Why!* time (i.e., guest-speakers) reduced the remaining hours of instructional time. As a result, we estimate George Munroe campers received somewhere between two and three days of instruction rather than five as intended.

Accounting for student absences, the chart below lists the usable (actual) pre-post combinations for 86 out of the 98 children who participated. Not all 86 children were present for each of the three pre-post assessment combinations. The second column reflects the usable combinations at each site after accounting for attendance.

VPK Center	Children with at Least One Pre-Post Combination	Total Pre-Post Combinations Across 3 Weeks
Bethel	18	42
George Munroe *	16	40
Happy Time**	22	37
Kids First	13	26
Kingdom Life	17	36
	86	181

** Happy Time campers received only two full weeks of camp. Week three instruction ended after the third day due to unforeseen circumstances. Assessment data for week three is not included in this report.

RESULTS

The process of learning to read does not occur as a linear progression. Early skills such as letter knowledge or phonics are necessary for optimal development, but they don't have to be mastered for growth to occur in other areas. For instance, a child who does not know all of her letters may have a relatively vast understanding of word meanings, as well as strong comprehension supported by her experiential background knowledge. Conversely, a child who may be able to identify many or all of the 26 letters of the alphabet may not have acquired age-appropriate vocabulary, oral language skills or background knowledge. Given the complexity of learning to read, and their highly individual experiences, it is not surprising that preschoolers exhibit a wide range of early literacy abilities. It is also understandable that they develop early reading skills at differing degrees.

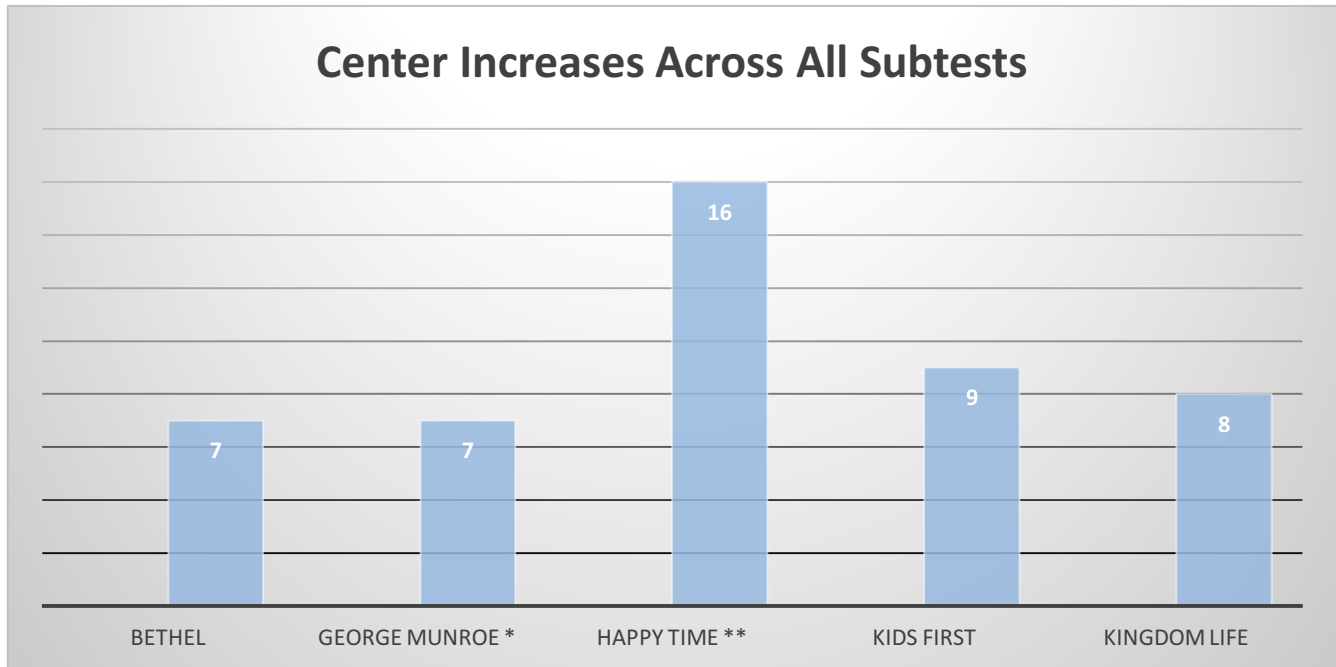
Prior to the *Super Why!* camp, ELC campers demonstrated varying abilities across the seven areas in the assessment. After participation in the *Super Why!* instruction, they each exhibited a forward progression in some or all skills. In particular, the *Super Why!* program was especially effective in increasing campers' Isolated Word Recognition, Sentence Reading, Vocabulary and Comprehension abilities.

- Campers were able to identify more words in the **Isolated Word Recognition** task (+10%), strengthening their awareness of word configurations for later accuracy in early reading tasks.
- **Sentence Reading** growth grew by 11%. Although we rarely think of preschool children as readers of connected text, the children who participated in this program were able to identify more words in theme-related sentences after each week's instruction. Some children noticeably used their knowledge of letter/sound blending to identify certain words. Others appeared to strictly identify words by "sight." Regardless, children grew in their experience with written-to-spoken correspondence, left-to-right directionality, sight-word development and fluency.
- Campers' **Vocabulary** knowledge was strengthened 21% possibly because of the varied ways in which the words are presented in the camp curriculum. Varied presentation and repetition of words support children's oral language development by reinforcing new connections between words and their meanings. This yields a stronger oral language and conceptual foundation for early reading.
- **Main Idea Comprehension** of the theme in the *Super Why!* episodes was strengthened by 25%, giving children more background knowledge upon which to draw as they encounter new ideas in language.

Overall, ELC campers' abilities increased by an average of 10% across all seven categories and 17% in the areas of strongest growth.

Combined Increases:

Campers were assessed in seven subdomains of reading development: Letter Identification, Letter Sounds, Phonics, Isolated Word Recognition, Sentence Reading, Vocabulary and Comprehension of the week’s theme. When all subtests are combined, every Pre-K center showed *at least seven percent improvement* across the three-week period.



Different centers featured children with varying prior knowledge. For instance, campers at Bethel demonstrated existing mastery (at least 90%) of constrained literacy skills (letter, sound and word family knowledge), so their opportunities for noticable growth were restricted to four rather than seven areas of the assessment. If the first three subtests are removed from the calculation, Bethel students show an overall increase of close to 12%.

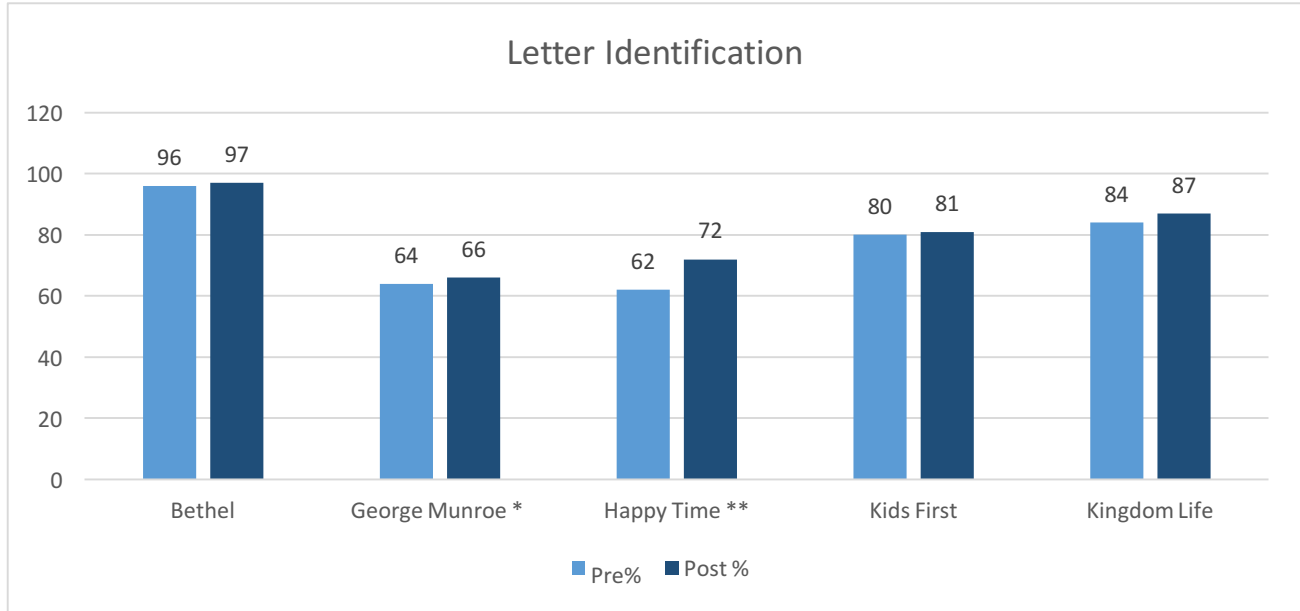
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SUBTEST RESULTS

Letter Identification:

On the Letter Identification subtests, campers were shown letter cards and asked to name the letters.



On average, ELC students increased their ability to identify letter names by three percent. Four students at Bethel, Happy Time, Kingdom Life and George Munroe increased their letter knowledge by at least 25%.

As mentioned above, many of the campers possessed strong letter identification knowledge before instruction started. For example, campers at Bethel were quite accurate and confident in their letter knowledge before instruction began each week (96%); this left very little room for improvement. The highest growth in this subtest (10%) occurred at Happy Time.

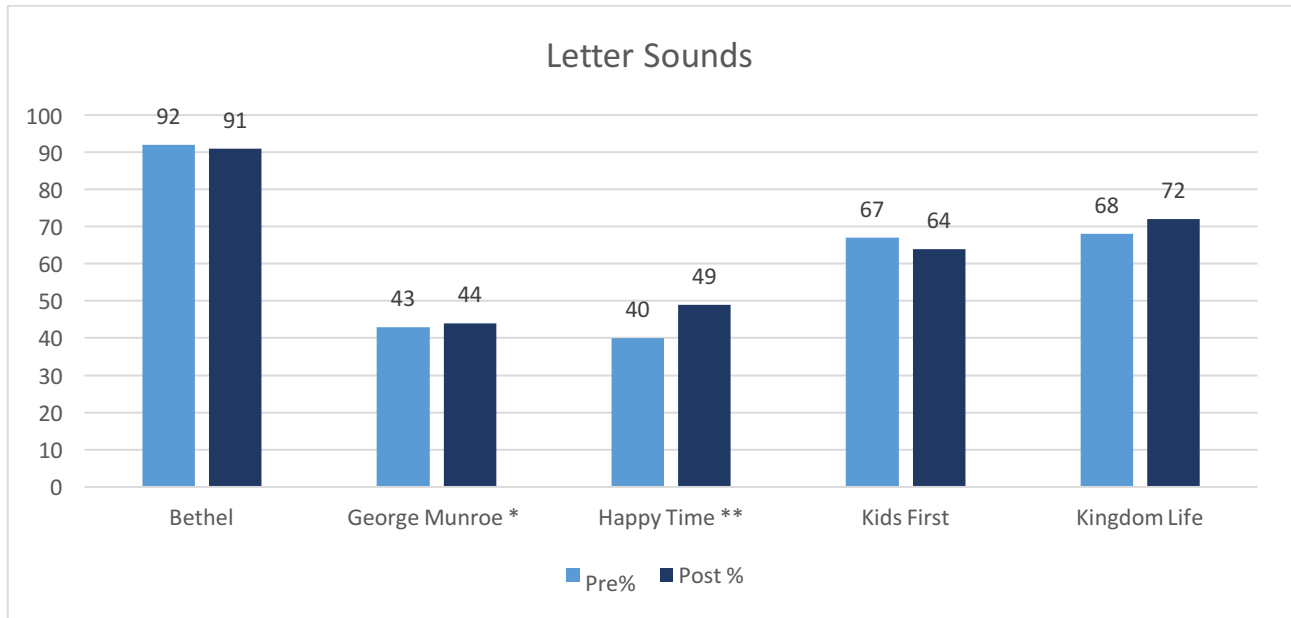
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SUBTEST RESULTS

Letter Sounds:

For Letter Sound subtests, campers were asked to name the letter that made a given sound.



On average, ELC Campers improved their knowledge of letter sounds by two percent. Five campers at Happy Time, George Munroe and Kingdom Life improved their knowledge of letter sounds by more than 29%, and two of those individuals improved 50% or more.

The highest growth in this subtest (9%) occurred at Happy Time.

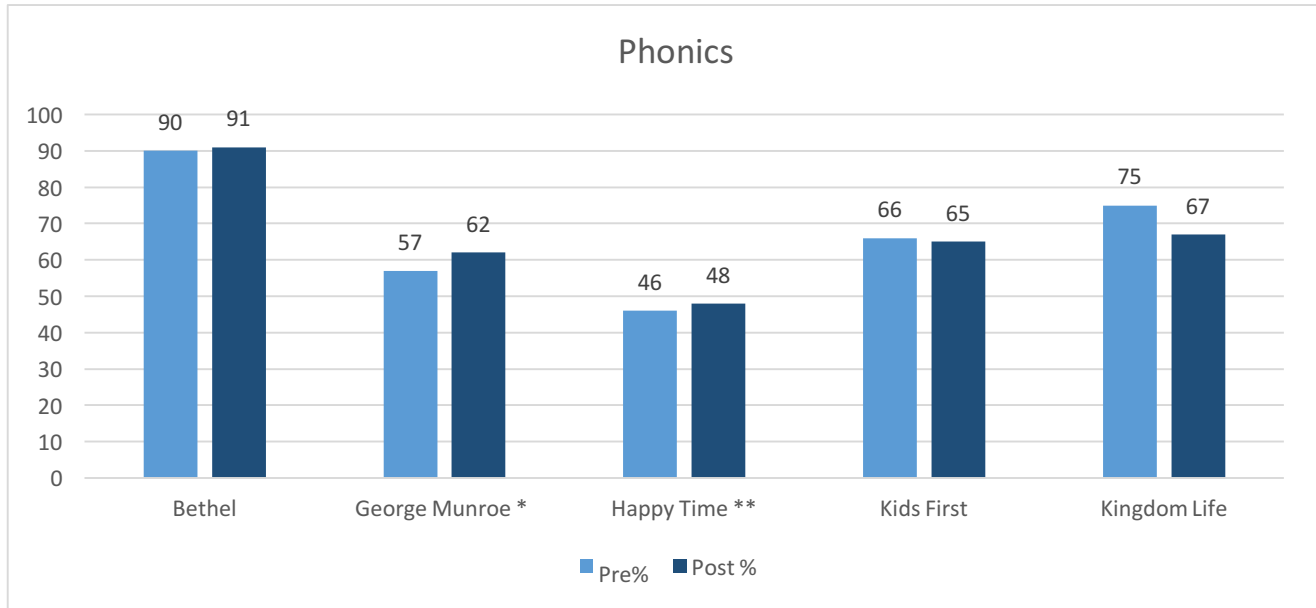
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SUBTEST RESULTS

Phonics:

Phonics skills were assessed by having campers identify the appropriate onset, or beginning letter, for a given rhyme, or word family. For example, a picture of a ball was shown along with ____ALL. Campers selected the appropriate beginning letter (W, B, or T) to make the word “BALL.”



On average, ELC campers' phonetic ability stayed constant. Six individual campers from Happy Time, George Munroe and Kids First increased their phonics abilities by 20% or more. Three of the six met or exceeded 27% improvement.

Despite fewer weekly hours of instruction, the highest growth in this subtest (5%) occurred at George Munroe. Campers at Kingdom Life appeared to be right at the cusp of learning to *consistently* blend letters, sounds and word families to make new words.

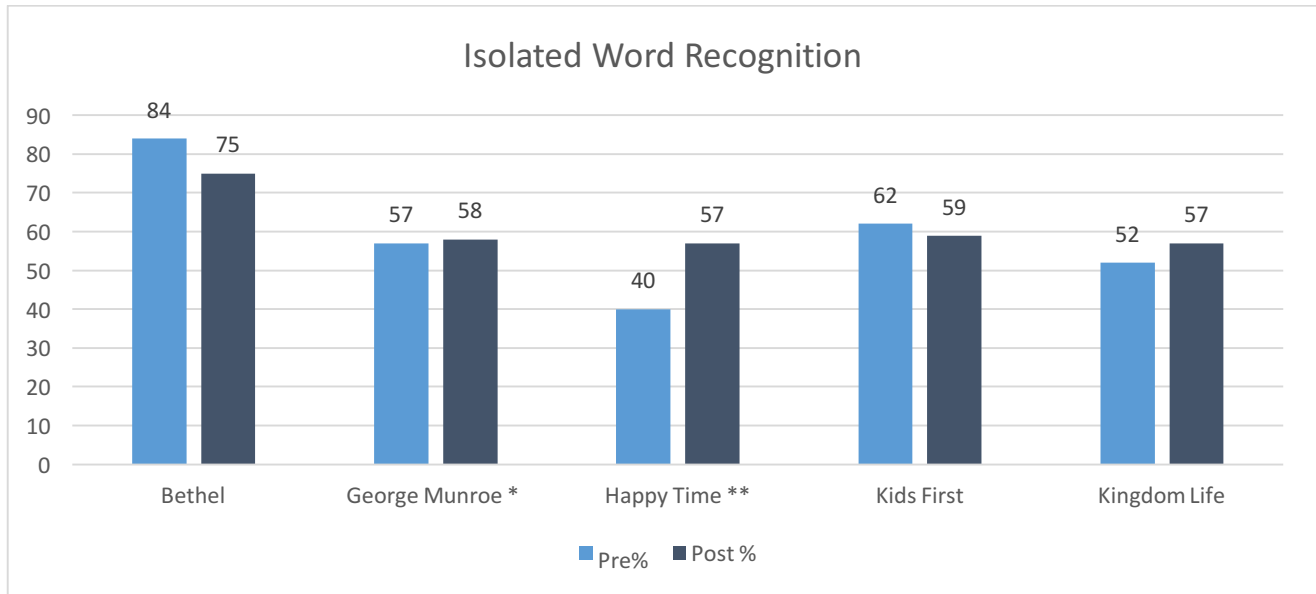
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SUBTEST RESULTS

Isolated Word Recognition:

For the Word Recognition task, campers were shown three isolated words with similar features and a supporting illustration. Campers were asked to identify which word was spoken by the WFSU staff member.



On average, campers increased their ability to identify single words by two percent. Four individual campers from Bethel, Happy Time and Kingdom Life increased their word recognition scores by at least 25%. Three of those early readers grew by more than 29%.

The highest margin of growth occurred at Happy Time where campers strengthened their ability to identify certain isolated words by 17%.

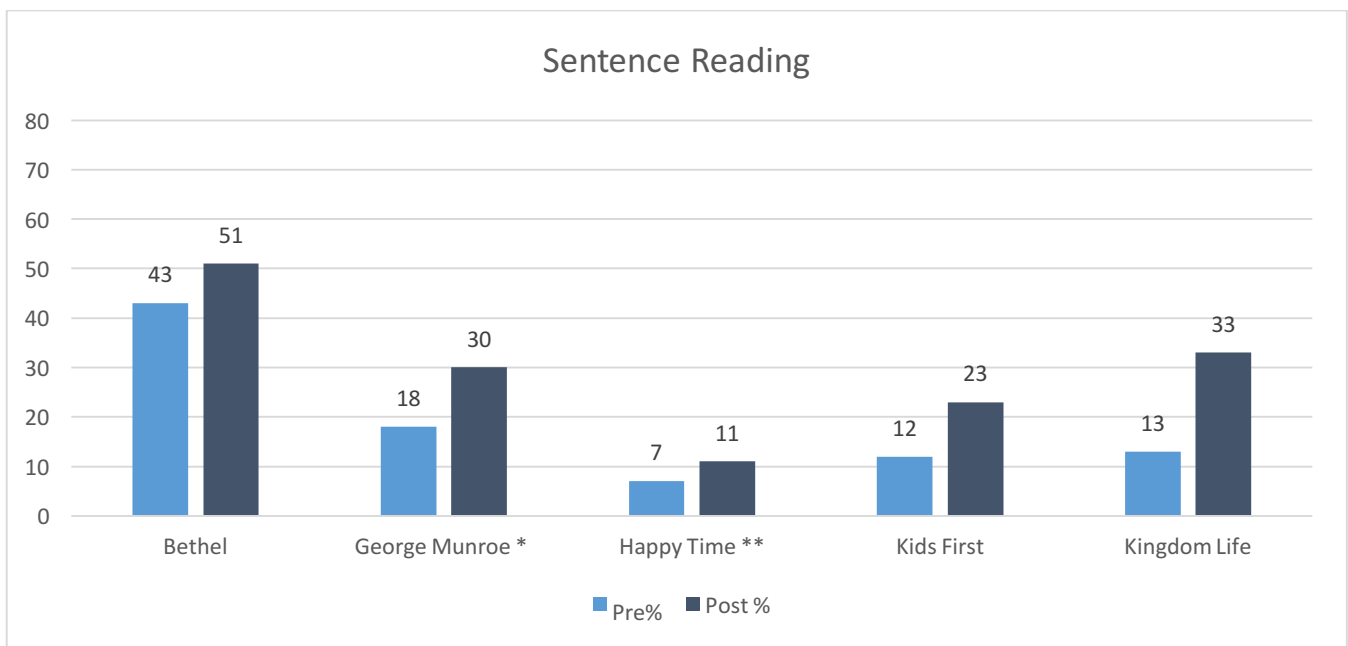
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SUBTEST RESULTS

Sentence Reading:

In all *Super Why!* episodes, main character Wyatt interacts with viewers to read and manipulate simple sentences. For instance, in Week 1 children see the sentence “There once was a small good wolf.” They are invited to read along with Wyatt as the words are highlighted. With guidance from Wyatt, children strengthen pre-literacy skills such as spoken-to-written correspondence, left-to-right directionality, sight-word development and fluency. During our assessment sessions, assessors showed campers short sentences to measure their ability to apply sentence reading skills in an off-screen setting.



On average, ELC campers demonstrated an increase of eleven percent in three weeks. Most pre-kindergarteners are rarely able to read sentences, and this subtest was by far the most challenging. However with repetitive and engaging learning activities, many students were able to transfer their word identification and reading fluency skills from the classroom to the assessment. Ten campers at Bethel, George Munroe, Kids First, and Kingdom Life showed an increase of at least 22%. Six of these ten campers improved 31% or more.

The highest growth in this subtest (20%) occurred at Kingdom Life.

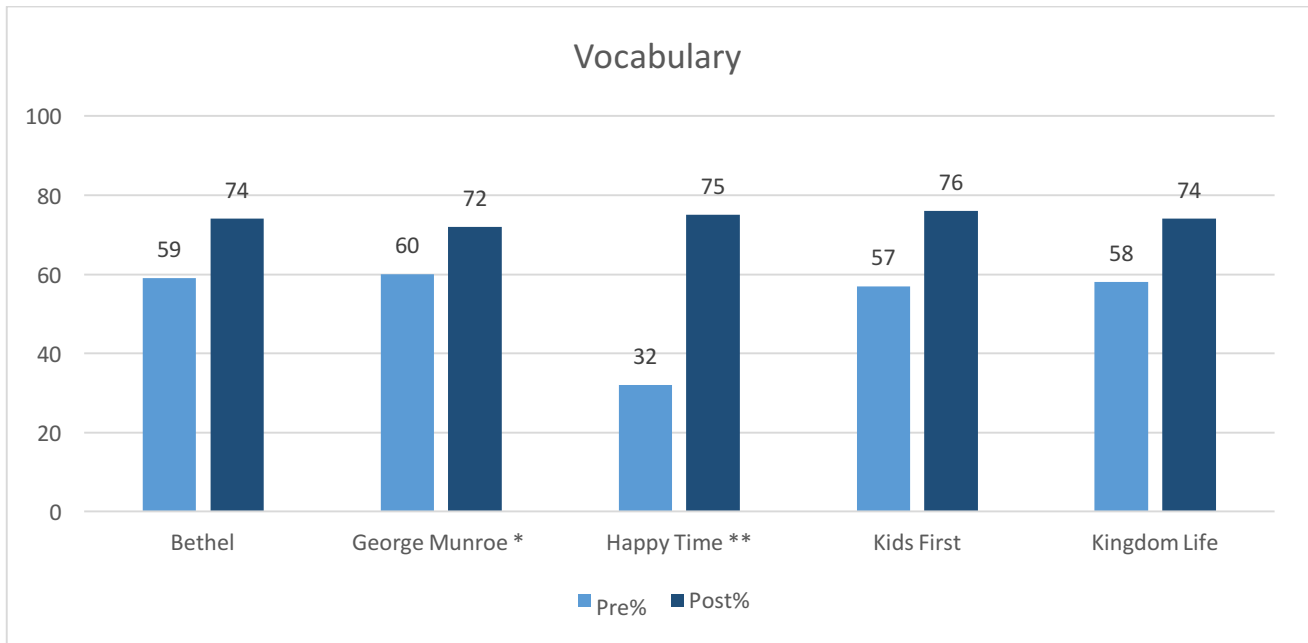
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SUBTEST RESULTS

Vocabulary:

To assess vocabulary growth, campers were asked to tell which of three words was the best response to a given meaning. Illustrations and reading support were provided.



On average, ELC campers increased their understanding of the featured vocabulary by 21%. Seven campers from Bethel, Happy Time, George Munroe and Kids First strengthened their vocabulary knowledge by 28% or more; four of those children improved by 50% and beyond.

The highest growth in this subtest (43%) occurred at Happy Time.

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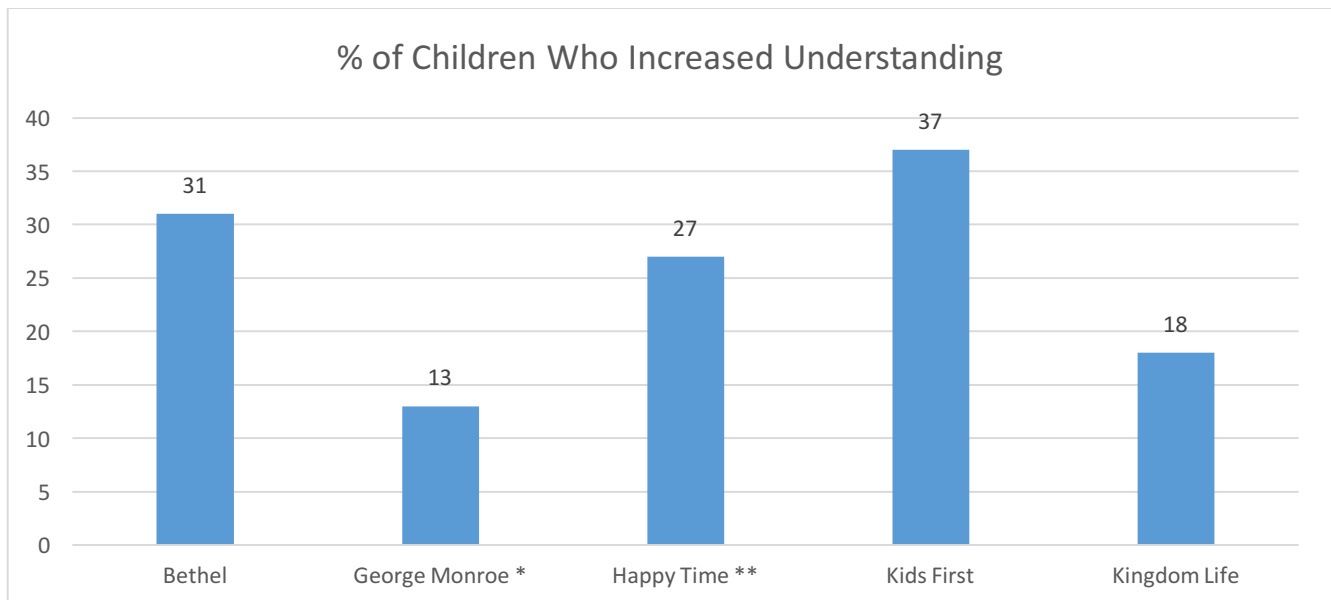
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SUBTEST RESULTS

Comprehension:

Super Why! episodes deliver two forms of content: narrative and educational (Fisch, 2004). The educational content, such as the sound made by a given letter, is embedded within the plot line or narrative of the characters' adventure. Along with the more explicitly taught educational content (e.g., letters, sounds and spelling), WFSU Education and Outreach wanted to include an assessment of campers' comprehension of the *narrative* component of the *Super Why!* episodes.

We queried campers to see if they could apply the main idea of episode narratives when questioned about episode themes. For instance, in the Week 2 episode (*Hansel and Gretel: Healthy Adventure*), the witch suffers from a lack of energy due to her diet of cookies and candy. In pre and post assessments, campers were asked: "What can you do to feel better if you always eat too much candy and cookies?" While many children demonstrated background knowledge in the pre-test (e.g., "go to the doctor," or "lay down"), several campers exhibited a refined understanding of the effects of nutritional choices after participating in Week 2 activities. After instruction, campers gave responses such as "eat healthy stuff like carrots and celery" or "eat vegetables."



On average, 25% of ELC children were able to more fluently articulate the main idea of the week. The highest growth occurred at Kids First (37%).

* See page 5.

** See page 5.

CONCLUSION

Rather than emphasize just one aspect of early literacy, *Super Why!* is a comprehensive early reading program that allows for growth within and across several different areas. Rising kindergarteners served by the Early Learning Coalition of the Big Bend benefitted from this engaging, hands-on and comprehensive approach to early literacy instruction, with the strongest growth in Word Recognition, Sentence Reading, Vocabulary, and Comprehension of Main Ideas.

We encourage all Pre-K educators and directors to take advantage of the PBS KIDS *Super Why!* Summer Reading Camp curriculum, found at <http://pbskids.org/superwhy/readingcamp/index.html>

REFERENCES

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: The MIT Press.
- Fisch, S. M. (2004). *Children's Learning from Educational Television*. Mahwah, NJ: Lawrence Erlbaum.
- Jennings, N. A., Hooker, S. D., & Linebarger, D. L. (2009). Educational television as mediated literacy environments for preschoolers. *Learning, Media and Technology*, 34(3), 229-242.
- National Association for the Education of Young Children (1998). Learning to read and write: Developmentally appropriate practices for young children. *Young Children* 53(4), 30-36.
- National Association for the Education of Young Children/Fred Rogers Center (2012). *Key Messages of the NAEYC/Fred Rogers Center Position Statement on Technology and Interactive Media in Early Childhood Programs*. Retrieved from https://www.naeyc.org/files/naeyc/file/positions/KeyMessages_Technology.pdf
- Piotrowski, J. T., Jennings, N. A., & Linebarger, D. L. (2013). Extending the lessons of educational television with young American children. *Journal of Children and Media*, 7(2), 216-234.
- Public Broadcasting System (2017). *Nationwide Survey Confirms that PBS and member Stations are America's Most Trusted Institution for the 14th Consecutive Year*. Retrieved from <http://www.pbs.org/about/blogs/news/nationwide-survey-confirms-that-pbs-and-member-stations-are-americas-most-trusted-institution-for-the-14th-consecutive-year/>