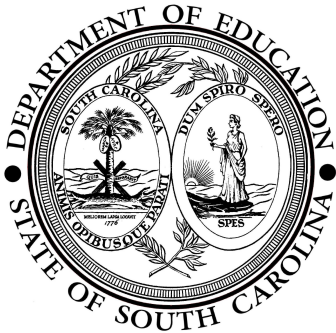
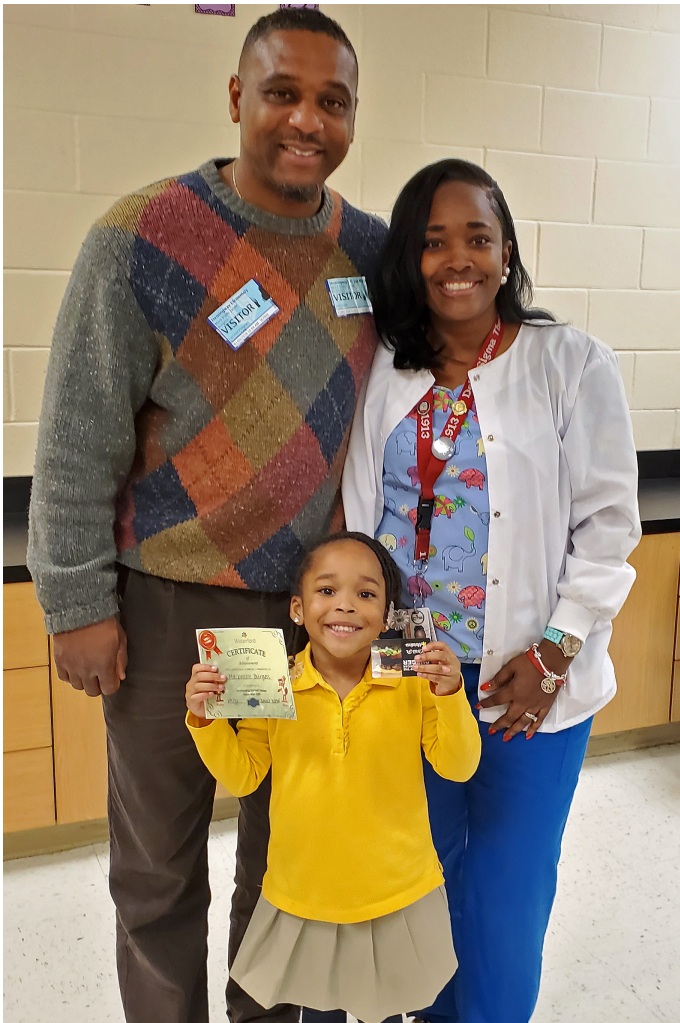


The following report was provided to the South Carolina Department of Education. The document is presented as it was submitted.

South Carolina Waterford UPSTART Family Engagement Program

2019-2020 School Year Outcomes



ABOUT WATERFORD UPSTART

Waterford UPSTART is an innovative human-powered, tech assisted learning model that **empowers parents and caregivers as their child's first teacher right in the home**. Using a blend of parent training, weekly coaching, and research-based early learning software, the program, implemented by Waterford.org **personalizes supports for families** to help **every child start school strong, ready for school success**. Under the program:

- Preschool-age children use **Waterford UPSTART in the home for 15-20 minutes a day**, five days a week. The usage model falls well within the American Academy of Pediatrics (AAP) recommendations of no more than one hour of screen time per day for 4-year-old children.
- Children receive a **personalized curriculum in reading, math and science** with an emphasis on reading.
- **Each family is assigned a coach to ensure strong parental engagement**. Waterford UPSTART provides a Family Education Liaison to each family to form a partnership with parents and caregivers to ensure all children obtain the education necessary for success in school.
- **Social-emotional learning** is modeled in the software learning sequence and developed by parents through off-line activities.
- **Computers** were provided for every child and **Internet service** was provided if the home did not have it.
- **Waterford UPSTART is aligned to South Carolina Early Learning Standards¹**; Head Start Early Learning Outcomes Framework; CASEL Social and Emotional Learning Competencies; and endorsed by the Council of Administrators of Special Education.



PARENT ENGAGEMENT

The **Waterford UPSTART parent empowerment model²** has developed over the program's 11 years of experience **working with families**. The program is designed to support small, incremental changes in behavior, with growth mindset activities that provide clear examples of ideas for parents and caregivers that are easy to implement.

- **Parent engagement activities are reinforced by live coaching from the Family Education Liaison** through weekly emails and personalized calls with parents to support program participation and fidelity, troubleshoot learning routines, and celebrate progress.
 - **Family Education Liaisons** that supported South Carolina families were **South Carolina residents**.
- In addition, **Mentor³ (Waterford UPSTART's parent support app)** provides weekly messages that invite, support, and guide parents to engage with their child's development to produce stronger impacts on parental engagement and child outcomes.

¹ South Carolina curriculum correlation available at: <https://owncloud.waterford.org/index.php/s/nCzI2DDeumwYNqF>.

² Additional information on Waterford UPSTART's parent empowerment model available at: <https://owncloud.waterford.org/index.php/s/dA6vxNyOI6cH0By>.

³ Additional information on Waterford Mentor available at: <https://owncloud.waterford.org/index.php/s/c7FPfNxqtTjz6ZF>.

- The **first** weekly message shares their child’s learning progress and encourages the parent to positively communicate with their child about what they are learning.
- The **second** recommends a simple family activity that builds foundational learning skills together.
- The **third** weekly message suggests an age-based social-emotional learning activity.

WATERFORD CURRICULUM

- **Waterford Early Learning** delivers individualized instruction in reading, math, and science that adapts to each child’s learning trajectory. The program includes 2,500+ lessons; 7,000+ activities; 360 digital books; 330 animated songs; and more than 450 instructional hours that meet national, state, and professional early learning standards and guidelines.
 - The **reading curriculum is aligned to the five essential components of reading as identified by the National Reading Panel.**
 - Students may access the **math and science curriculum** after completing their daily reading instruction. This is optional, usage of this curriculum is not included as part of these results.



STUDENT ASSESSMENT

- **Waterford Assessment of Core Skills (WACS)**⁴ is a computerized adaptive test of early literacy for students in Pre-Kindergarten through second grade. Initial content validity for WACS was established against state and national standards for the following subsets:

○ letter recognition	○ reading nonsense words
○ letter sound	○ sight words
○ initial sound recognition	○ reading comprehension
○ blending	○ listening comprehension
○ reading real words	○ vocabulary
- To establish concurrent validity and predictive validity, student performance on WACS was compared to performance on five commonly-used standardized tests also measuring reading skills: **Dynamic Indicators of Basic Early Literacy Skills (DIBELS)**, **Texas Primary Reading Indicator (TPRI)**, **Idaho Reading Indicator**

⁴ Additional information on WACS available at: <https://owncloud.waterford.org/index.php/s/id7ZM5LMsh0ANQt>.

(IRI), **Iowa Tests of Basis Skills (ITBS)**, and **Stanford Achievement Test Series (SAT 100)**. All correlations between tests are highly significant.

- **WACS is an adaptive test.** Pre-Kindergarten students only see the basic skills unless they perform well, in which case they also see advanced skills. When students take WACS for the first time, most of them receive basic skills only. As students use Waterford Early Learning and advance their reading abilities, they perform better at the end of the program when taking WACS, and are able to successfully complete basic skills as well as advanced skills. Therefore, the number of students receiving advanced skills increases from the beginning of the program to the end of the program.

EXTERNAL EVALUATION OF WATERFORD UPSTART

Waterford UPSTART's evidence of effectiveness has been thoroughly vetted in the most rigorous contexts and was a critical factor in recent grant awards, including a **federal Education Innovation and Research (EIR) Expansion Grant**⁵ in 2018 (one of three Expansion Grants nationally) and the **Audacious Project**⁶ in 2019 (one of eight awards worldwide).

- Annual External Evaluations – **Third party evaluations**⁷ show **Waterford UPSTART children have significantly higher learning gains than children from control groups**, as measured annually by the Brigance Inventory of Early Development and the Bader Reading and Language Inventory.
- Longitudinal Evaluation – The **Utah State Board of Education conducted a longitudinal evaluation**⁸ of Waterford UPSTART results. The evaluation found that **Waterford UPSTART students continually outperformed state averages compared to their non-UPSTART peers** on state standardized tests (DIBELS and SAGE) through the 4th grade (highest grade achieved at the time).
 - Significantly, **Waterford UPSTART gains were markedly better across all subgroups than non-UPSTART peers**, including across special education, minority, low-income, and English learner populations.
- Randomized Controlled Trial (RCT) – In 2013, Waterford.org was awarded an **Investing in Innovation (i3) Validation Grant**⁹ by the U.S. Department of Education that provided Waterford UPSTART to Utah's 18 most rural school districts. That grant was used to administer an RCT that showed, **Waterford UPSTART has a substantial impact on improving student growth and closing achievement gaps for early learners**.
- Social-Emotional Skill Development – In 2018, Waterford UPSTART outcomes were evaluated¹⁰ as part of **Utah's High-Quality School Readiness Grant**. A review of post-program **social-emotional development skills by program group showed similar results for Waterford UPSTART participants when compared to both public and private site-based preschool programs**.
 - In 2019, an external evaluation¹¹ of the **Indiana state-funded UPSTART program** found that **Waterford UPSTART did not hinder children's social skill development, with results showing similar age-appropriate social skill growth to control subjects** from pre to post tests.

⁵ Information on the EIR Expansion Grant available at: <https://oese.ed.gov/files/2019/11/U411A180001-Waterford-Institute-Narrative.pdf>.

⁶ Information on the Audacious Project available at: <https://audaciousproject.org/ideas/2019/upstart-project>.

⁷ External evaluations (Years 1 through 9 in Utah) are available at: <https://owncloud.waterford.org/index.php/s/OT1ljgWyyVyQuG3>.

⁸ Longitudinal evaluation available at: <https://owncloud.waterford.org/index.php/s/p5GJNvevuKZGBJl>.

⁹ Randomized Controlled Trial (RCT) available at: <https://owncloud.waterford.org/index.php/s/O3fE1X0JjR4h5Ve>.

¹⁰ Utah High-Quality School Readiness Expansion Program Evaluation available at: <https://owncloud.waterford.org/index.php/s/ufslWGVhtYj8qJ>.

¹¹ Indiana Preschool Impact Study available at: <https://owncloud.waterford.org/index.php/s/PZL0aRL8mgQzaK1>.

SOUTH CAROLINA WATERFORD UPSTART FAMILY ENGAGEMENT PROGRAM

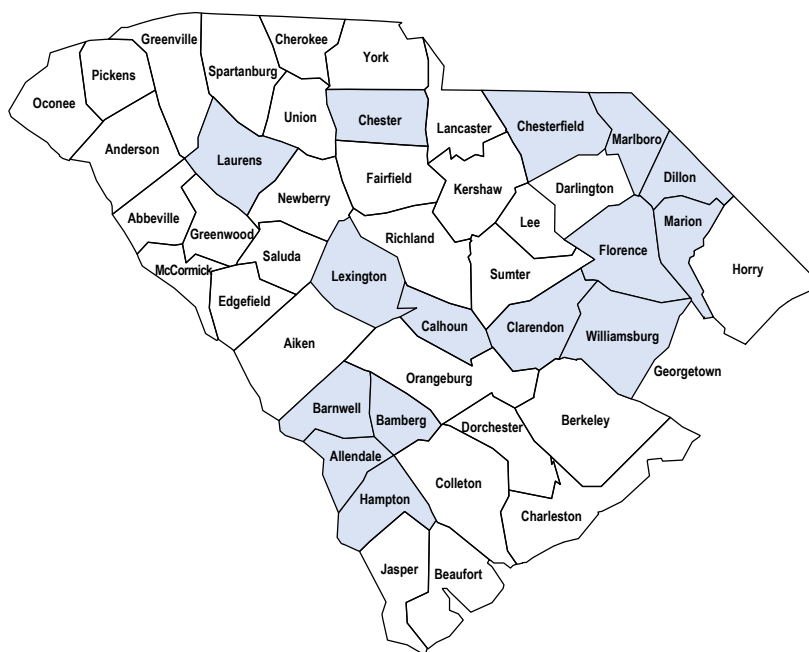
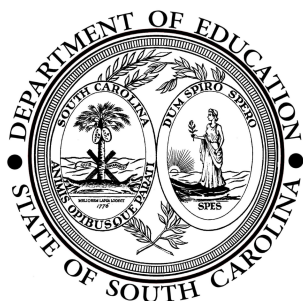
Waterford.org seeks to blend the best aspects of learning science, mentoring relationships, and innovative technologies to form community, school, and home programs that deliver excellence and equity for all learners.

The **South Carolina Waterford UPSTART Family Engagement Program** focused on children, families, and their teachers to: (1) help students develop the foundational skills needed for school success; (2) increase parent engagement in the education of their young children; and (3) build robust school-to-home partnerships.

- A video about the Waterford UPSTART Family Engagement Program in South Carolina featuring administrators, teachers, and participating families can be viewed at: <https://www.youtube.com/watch?v=HON4XojkNJk>.

Waterford.org partnered with the **South Carolina Department of Education** to administer the Waterford UPSTART Family Engagement Program which included approximately **1,774 preschool age children** in **129 classrooms** across **18 different school districts** in the state.

Waterford UPSTART Family Engagement Program Counties



School District	Classrooms	Students
Allendale	3	33
Bamberg 1	2	20
Bamberg 2	2	23
Barnwell 19	1	19
Calhoun	5	83
Chester	10	200
Chesterfield*	13	139
Clarendon 1	2	30
Clarendon 2	5	100

School District	Classrooms	Students
Dillon 4	6	120
Florence 3	10	140
Hampton 1	8	150
Hampton 2	2	39
Laurens 56	6	109
Lexington 4	28	198
Marion*	11	91
Marlboro	8	150
Williamsburg	7	130

* Chesterfield and Marion County School Districts started the program on a different timeline and will complete the program in August 2020.

PROGRAM OVERVIEW

- After in-person family trainings and initial student assessments were completed, full program implementation started in **October 2019**; the program concluded with online final student assessments and virtual graduations (because of the COVID-19 pandemic) for families in **May 2020**.
 - **Pre-Kindergarten students** engaged in 15-20 minutes of personalized learning at home, five days a week. Their usage and performance was monitored by Waterford.org to provide performance data and insight into their areas of strengths and weaknesses for teachers. Building on activities in the home, students received differentiated instruction in class, including small and whole group learning, to better connect learning from the home to their school.
 - **Parents** attended orientation meetings to learn about Waterford UPSTART, the curriculum, and usage requirements for their children. Orientation meetings stressed the importance of early education as the foundation for success throughout a child's life; that parent involvement helps extend teaching outside the classroom so children perform better in school; and that children can achieve significant academic gains when parents establish a learning routine. Throughout the program, parents received ongoing coaching and mentoring from their Waterford.org Family Education Liaison (FEL). The FEL collaborated with families to encourage usage and drive parent-child relationships. Additionally, families were provided with the Waterford Mentor app that delivered personalized weekly messages about routines, achievements, and activities. Finally, parents participated in regularly scheduled Family Engagement Workshops conducted by Waterford.org Implementation Specialists that were designed to offer additional family-friendly activities and strategies to do at home.
 - **Teachers** received face-to-face professional development and instructional coaching from a Waterford.org Implementation Specialist throughout the program. Implementation Specialists provided instruction on analyzing and interpreting Waterford UPSTART data; using that data to create whole and small group learning opportunities; and aligning the program to their existing resources and curricula. Throughout the program, teachers developed and implemented lesson plans for whole group instruction, targeted student learning, and small group interventions.

OUTCOMES

The following table provides **question difficulty ranges for the Waterford Assessment of Core Skills (WACS) by grade level**. Note each grade is divided into thirds, for example, Kindergarten Beginning, Kindergarten Intermediate, and Kindergarten Advanced.

Grade	Beginning	Intermediate	Advanced
Preschool	1001 - 1333	1334 - 1666	1667 - 2000
Kindergarten	2001 - 2333	2334 - 2666	2667 - 3000
First	3001 - 3333	3334 - 3666	3667 - 4000
Second	4001 - 4333	4334 - 4666	4667 - 5000

Average **final scores for children that completed WACS**¹² under the program showed the following **notable outcomes**:

- **Children's outcomes averaged at the "Kindergarten Intermediate" level**, where most children score mid-point during the Kindergarten year.

¹² Waterford.org was not able to proctor in-person final assessments because of the COVID-19 pandemic; accordingly, these results only include students who scored within one standard deviation of their predicted overall end of year WACS scores.

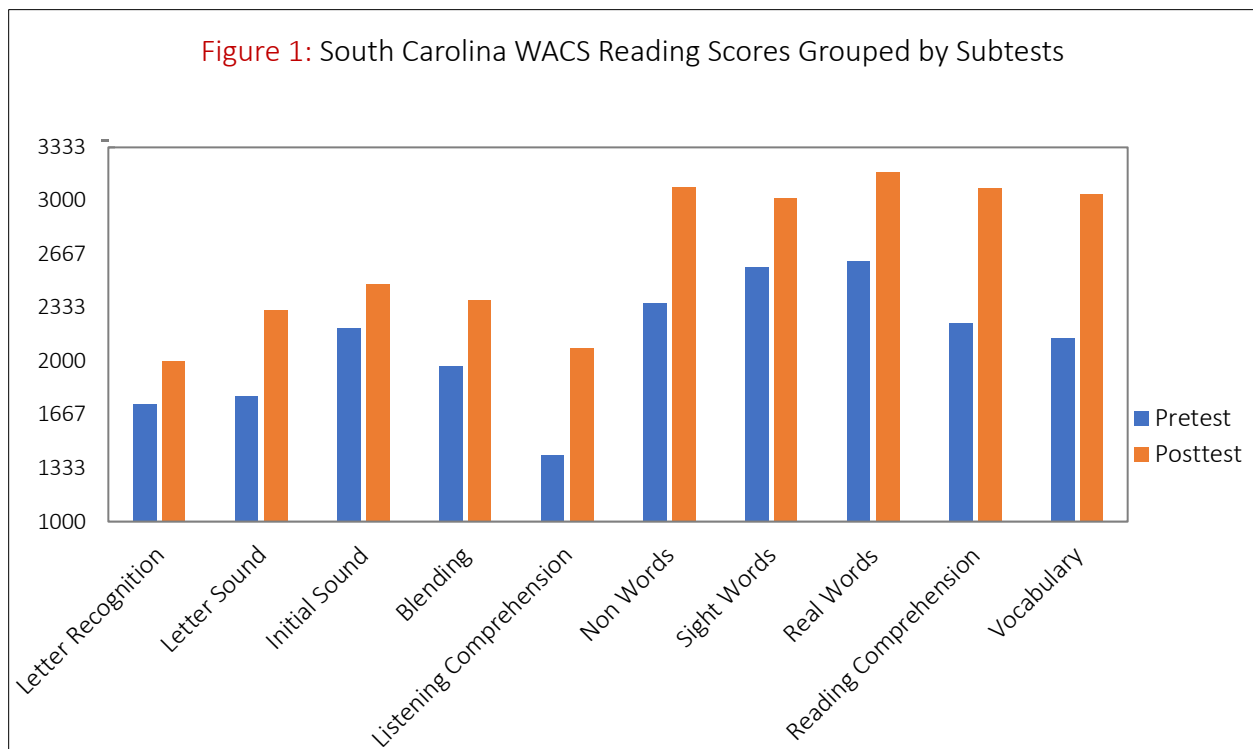
- **80.06% of children scored at “Kindergarten Beginning” or above**, demonstrating strong school readiness outcomes.
- **Children’s outcomes averaged at the “First Grade Beginning” level** for five out of the ten subtests under WACS (non words, sight words, real words, reading comprehension, and vocabulary).

The following table shows average final **WACS subtest scores and their grade equivalents** for the program.

Measured Skill	Final WACS Score	Grade Equivalent of Final WACS Score
Letter Recognition	2000	Preschool Advanced*
Letter Sound	2319	Kindergarten Beginning
Initial Sound	2480	Kindergarten Intermediate
Blending	2381	Kindergarten Intermediate
Listening Comprehension	2082	Kindergarten Beginning
Non Words	3083	First Grade Beginning
Sight Words	3016	First Grade Beginning
Real Words	3181	First Grade Beginning
Reading Comprehension	3080	First Grade Beginning
Vocabulary	3044	First Grade Beginning

* Note that “Kindergarten Beginning” is highest possible achievement level for the “letter recognition” skill. Children’s outcomes averaged one point below the highest level for this measured skill.

Figure 1 shows average results for **WACS pretest and posttest scores, grouped by subtests** for the program:



Program data on **reading level classifications** showed the following **notable outcomes**:

- There was a **4,877.77% increase in the number of students that were classified in the Pre-Reading 3 level** (from 9 students in October 2019 to 448 students in May 2020).
- In **October 2019, there were no children that reached the Basic Reading 1 level**; in **May 2020, there were 153 children classified in the Basic Reading 1 level**.
- The amount of time children accumulated on the curriculum over the course of the program was directly related to the extent of their increase in reading level progression.** Note that additional children were added throughout the program (including 222 children from the Chesterfield and Marion County School Districts that started the program later in the year than the rest of the participating school districts).

The following table shows **reading level progression from lower reading levels into higher reading levels** under the program.

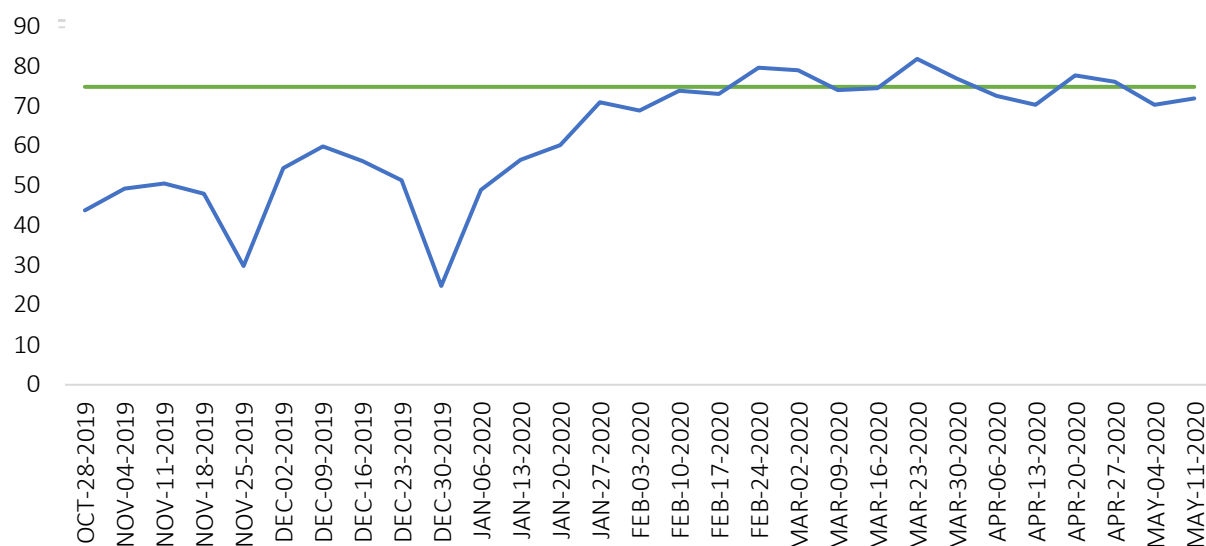
Completion Level	October	November	December	January	February	March	April	May
Pre-Reading 1	1,055	946	813	724	843	768	699	674
Pre-Reading 2	109	261	338	376	409	496	490	476
Pre-Reading 3	9	68	135	224	305	378	439	448
Basic Reading 1	0	3	13	23	54	87	128	153
Basic Reading 2	0	0	0	3	3	4	11	18
Basic Reading 3	0	0	0	1	4	6	7	8
Fluent Reading 1	0	0	0	0	0	1	0	1
Fluent Reading 2	0	0	0	0	0	0	1	0
Fluent Reading 3	0	0	0	0	0	0	0	1
Total Students	1,173	1,278	1,299	1,351	1,618	1,740	1,775	1,779

AVERAGE WEEKLY USAGE

Figure 2 shows South Carolina participants' average usage of Waterford.org's Early Reading Program on a weekly basis, as shown by the blue line. The green line indicates the recommended usage criterion of 75 minutes per week. Usage is a key indicator of parent involvement with the program.

- The **average weekly reading usage** was **63.07 minutes** during the program.
- The **average total usage** for the program was **1,829.30 minutes** from **October 2019 through May 2020**.
- Average weekly usage increased during the 29 week program** (with expected shortfalls during the Thanksgiving and winter holiday breaks), indicating **increased parental engagement over the course of the program**.
- Strong weekly usage was maintained during school closures related to the COVID-19 pandemic.**

Figure 2: South Carolina Average Weekly Usage - Early Reading Program



IMPLEMENTATION TEAM

To implement the Waterford UPSTART Family Engagement Program, **Waterford.org employed a team of 12 South Carolina residents** that included a Program Manager, Implementation Specialists, Family Education Liaisons, and Family Education Liaison Leads.

During the onset of the COVID-19 pandemic, the **Waterford.org team supported the creation and development of SC Remote Learning¹³** that provided distance learning resources for South Carolina educators, parents, and students.

PARENT SATISFACTION

Parents/guardians were sent a survey to provide feedback related to their, and their child's, experience in the Waterford UPSTART Family Engagement Program.

% Agree	Survey Question
88% YES	The program prepared me to help my child in school next year.
93% YES	The program helped prepare my child for Kindergarten.
85% YES	My child is now better able to work independently.
87% YES	The amount of contact from the coach (Family Education Liaison) was adequate.
96% YES	Did the coach give you what you needed to effectively support your child?
99% YES	The coach was friendly and polite when we spoke.
99% YES	The coach was knowledgeable about the program and software.
96% YES	Do you think the program was age appropriate?
90% YES	Do you feel the weekly usage requirements were appropriate?

¹³ See <https://scremotelearning.com>.

TEACHER FEEDBACK

Teachers and administrators were sent a survey to provide feedback and comments about the program. Comments include:

- *This program is super great, the kids like it, the parents like it, teachers love it (reinforcement of classwork), and everyone is enjoying the learning process. (Williamsburg)*
- *I'm able to see what my students are working on as well as what they're having problems with. They enjoy getting on the program and working on the lessons. Next year I plan to use the curriculum for small group instruction more. (Allendale)*
- *Parents are able to help their young one navigate through the program from home and most of the children seem to enjoy it. The reports are easy to read and the websites are simple to navigate. (Lexington 4)*
- *I thought this provided such an amazing opportunity for students in need. We serve students who lack resources and parental involvement at home, so this was a means for them to have enrichment opportunities where they otherwise wouldn't, and I think it really has helped several of my students make growth they otherwise wouldn't have made. It was a nice resource for me as well because I could use it to monitor how my students were growing and see what they still needed help with, and then I could take that information and create groups that focused on those specific needs. This program was also very useful during the time our students were out of school because of the national pandemic and spread of Coronavirus. (Laurens 56)*
- *I've had a very great experience with this program. I love it, the children and their parents love it! The activities were age appropriate and they also challenged them. It also helped me see what areas the children needed help in. I'm looking forward to using this program again. (Bamberg 2)*
- *This is an awesome program. When you work in an area that suffers with family engagement, this is a great equalizer. (Clarendon 1)*
- *I saw a huge difference in the students' achievements that were using the program at home versus the students that were not using it. I think it was a great opportunity for my students! (Marlboro)*
- *I love how students can work on Waterford and how the program tailors usage according to the student's ability. I also love how I can pull lessons to teach as small group or large group based on data I receive regarding student progress. (Allendale)*