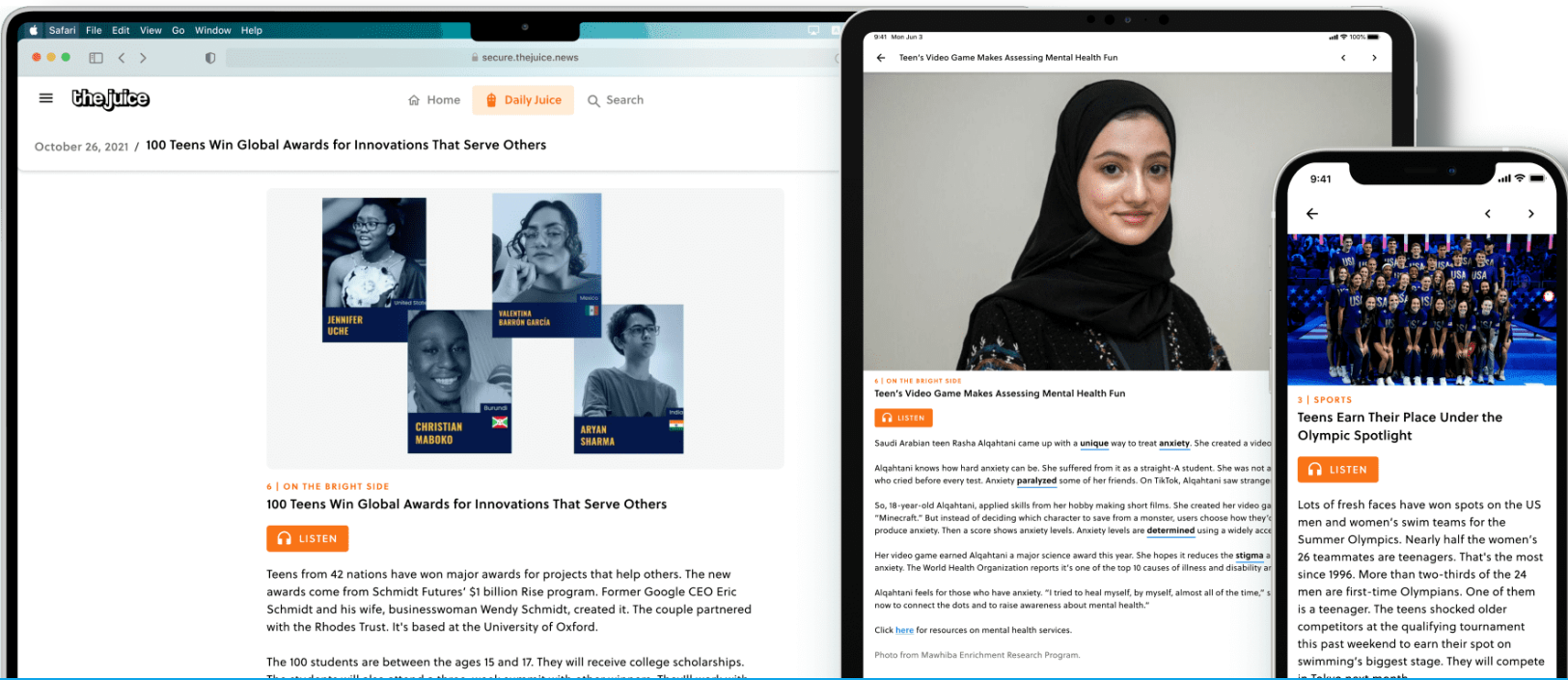


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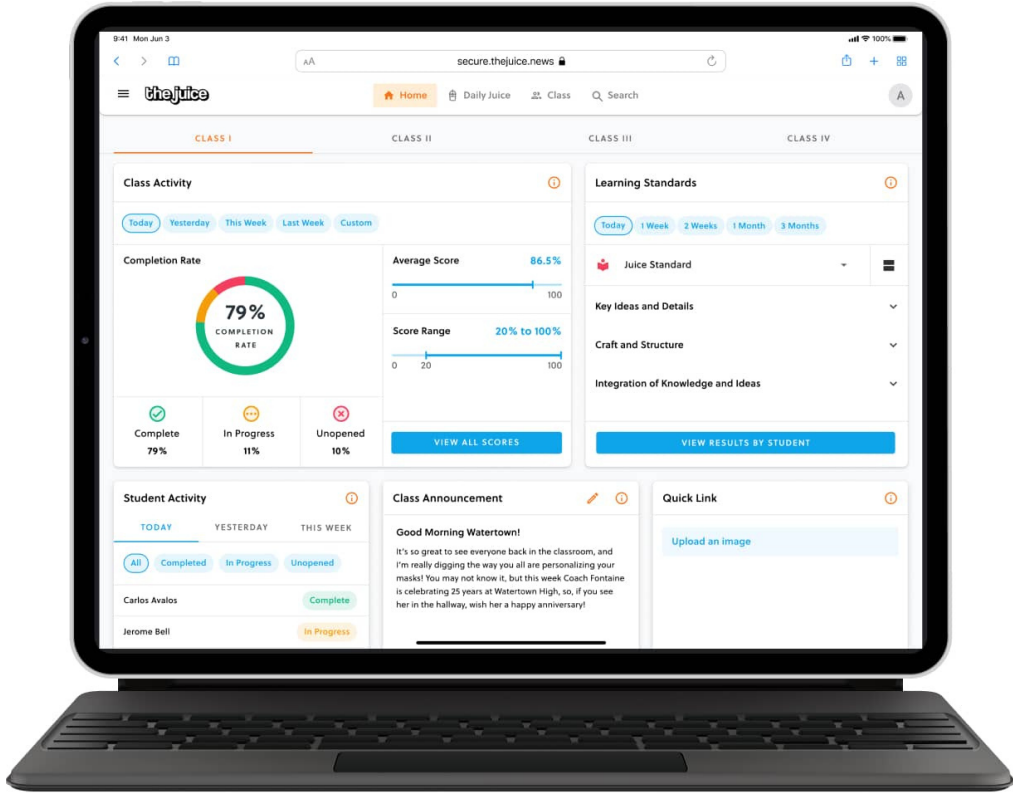


TABLE OF CONTENTS

Overview	2
Our Philosophy and Approach	3
Research Introduction	3
Increasing Engagement with Culturally Relevant Content to Make Learning Meaningful	3
Improving Performance of Low-Ability Readers through Daily Accessible Content	4
Supporting Students of Varying Learning Proficiency	5
Making Student Learning Visible with Linked Formative Assessments and Feedback	6
Bibliography	7

OVERVIEW

The Juice[®] is an interactive learning platform that fosters an independent love of reading and equips young people with the necessary skills to thrive throughout their academic career and beyond.

Published five days a week, The Juice teaches young people how to read with comprehension, communicate with nuance, empathize with others, and think critically about the world around them. Each day, students receive a mix of original news articles, vocabulary builders, standards-aligned quizzes, infographics, deep dives on important topics and issues, and educational STEAM videos. The immediate relevance of the content in the Daily Juice engages readers of all abilities and serves as the on-ramp for a deeply enriching learning experience.

The Juice's data-driven dashboard provides teachers and parents real-time, detailed, state-standard-aligned reports and insights on student performance. These reports provide essential information about users' comprehension skills.

Veteran educators, middle grade and YA authors, and award-winning journalists on The Juice's team use their combined expertise to carefully write the Daily Juice.

The Juice makes even the most complex topics understandable and accessible to all its readers by crafting its content at four separate reading levels based on a proprietary combination of the Flesch-Kincaid, Gunning-Fog, and Dale-Chall scores. While the narrative remains the same, sentence structure and vocabulary are adjusted to meet developing readers where they are along their reading journey.

Each morning by 6am, students receive five original articles on a wide range of topics — from major US and world news, the economy, and the environment, to scientific discoveries, civics, the arts, and inspirational stories highlighting exemplary moral character. In addition, each issue has at least one thoroughly researched 600-1,000-word supplement that provides context and background to help students understand complex issues.

Students and teachers have access to The Juice's easily searchable, vast archive of thousands of articles and supplements that can be used for students to pursue their own lines of inquiry or research. And teachers can use it to package together thematic lessons, or identify articles that simultaneously match a students' individual interests with targeted skill development.

The Juice produces balanced articles that students, teachers, and parents can trust. Educators who build lessons around The Juice attest that it stimulates lively discussions about what's happening in the world while advancing the development of vitally important learning skills for students and teaching them how to evaluate media coverage critically.

OUR PHILOSOPHY AND APPROACH

We believe all students are interested in the world around them. We effectively harness students' innate curiosity about the world by providing them with short-form articles, carefully crafted to be engaging, and scaffolded to be accessible for readers of all abilities. In doing so, we believe we can help Juice users develop the habits of mind to become voracious readers and life-long learners.

Differentiated materials are essential for students with diverse levels of reading proficiency to reach and exceed grade-level standards. Our approach to content aligns to research that proves knowledge building, combined with differentiated and scaffolded reading material, leads to increased reading performance for students of all abilities. We also help students make their learning visible by linking our differentiated reading content with higher-order thinking formative assessments and immediate feedback.

RESEARCH INTRODUCTION

Five key factors drive the learning science and educational approach of The Juice:

1. The importance of cultural relevance as a precursor to student engagement and the effect that student engagement has on academic performance.
2. The importance of a knowledge building curriculum and intensive vocabulary building as key components to developing reading comprehension skills.
3. Short-form content can be a powerful catalyst to support reading comprehension growth for learners, build confidence, and establish a daily habit of reading.
4. Differentiated content provides equity and access for struggling readers to improve reading comprehension growth while avoiding stigmatization and stratification in the classroom.
5. Make student learning visible with formative assessments and feedback to support skills mastery.

INCREASING ENGAGEMENT WITH CULTURALLY RELEVANT CONTENT TO MAKE LEARNING MEANINGFUL

Students are more likely to engage in reading and learning when the content is relevant to their own lives. Research has shown that educators can deepen learning for students by helping them understand the relevance and importance of what they are reading about (Guthrie, Wigfield, Klauda, 2012). The Juice's instructional approach aligns with studies that have found strong correlational relationships between student motivation, time spent reading, and academic achievement (Appleton, Christenson, & Reschly, 2006; Farrington et al., 2012). Research proves that a precursor to academic achievement is student engagement (Gettinger, Ball, Thomas, & Grimes, 2007). The Juice's foundation builds on the premise that two of the main drivers behind student engagement are a) content relevance and b) self-confidence.

Teaching methods that connect with students' lives and interests are associated with better academic outcomes. Students are also more likely to engage when the text makes a real-world connection with their concerns and interests (Byrd, 2016). The Juice empowers educators to tap into students' interests by providing content that brings the real world into the classroom.

Another key aspect of The Juice's instructional approach is the premise that facilitating options for students to make their own choices about what they prefer to read encourages autonomy (Goodwin, 2010). Research shows that having a classroom environment rich in reading options is essential for supporting readers (Gambrell, 1996). The Juice empowers students to choose which content they are most interested in by providing classrooms with 25 new informational texts each week and access to a library with 2000+ texts. Each day's content in The Juice intentionally draws from subjects across disciplines, including breaking news, world news, environment, health, economics, science, arts and entertainment, technology, sports, humanities, articles emphasizing social and emotional learning and moral character, and quotes and biographies from prominent historical and contemporary figures.

IMPROVING OUTCOMES FOR ALL READERS BY EMPHASIZING A KNOWLEDGE AND VOCABULARY-BUILDING APPROACH

For nearly a century, the importance of vocabulary acquisition has been understood as a pillar to reading achievement (Davis, 1944). For this reason, The Juice purposely uses grade-level appropriate tier two and tier three vocabulary words in every article and provides in-text definitions for readers.

Studies have also consistently shown that background knowledge is a key building block for reading comprehension (Reid Smith, Snow, Serry, and Hammond, 2021). In fact, prior knowledge of a subject has been shown to have a greater impact on reading comprehension than decoding skills or reading strategies (Samuelstuen MS, Bråten I., 2005). With that in mind, the content team at The Juice carefully creates a daily lineup of articles that provides its readers with a sweeping view of the world, from current events, to breakthroughs in STEM, to economics, sports, culture, and beyond. For developing readers, general knowledge is a major predictor of success (Grissmer, Grimm, Aiyer, and Murray, 2010). By focusing on current events and featuring articles that cover a diversity of topics, The Juice exposes readers to subject matter that is relevant across all traditional curricula while being highly engaging. In addition to its clear connection to improving reading comprehension, having a broad knowledge base about a variety of topics provides young people with greater ability to make cross-curricular connections and stimulates intellectual curiosity.

With knowledge-building as a foundation, every Juice article is written at four different reading levels and embedded within a platform that provides scaffolded reading support and side-by-side translations in over 70 different languages to support English language learners. The result is that students simultaneously develop reading comprehension skills while also

broadening their knowledge base. This integrated approach to improving reading outcomes has achieved proven results (See Appendix).

IMPROVING PERFORMANCE THROUGH DAILY ACCESSIBLE CONTENT

The ability to read well is the cornerstone of a child's education. In their early years of schooling, children learn to draw meaning and pleasure from the words on a page, which gives them a sense of accomplishment. Throughout the remainder of their education, reading is a foundational skill used to power learning in all parts of the curriculum (NAEP, 2022).

As students move up through grades, the expectation is that they can engage with longer text passages that are increasingly complex. However, many students are reading below their grade level. In 2022, only 29% of eighth-grade students performed at or above the NAEP Proficient level on the reading assessment (NAEP, 2022).

Research studies indicate that educators can assist struggling readers through chunking text, which means taking complex ideas and breaking them down into accessible passages. Separating reading material into short and manageable sections can lead to significant growth for struggling readers (Casteel, 1988). Studies have shown that presenting content to students in short-form sections can increase students' ability to pay attention and improves retention of information (Lah, Saat, and Hassan, 2014). Additionally, chunking provides readers with a sense of accomplishment, builds confidence, contributing to increased enjoyment and investment in learning.

Every academic day, The Juice provides teachers with five differentiated informational texts that are written about subject-related current events topics and are all shorter than 300 words in length. The length of Juice articles has been influenced by the aforementioned research on chunking text.

Students need ample time to read and re-read deliberately to consider the meanings of individual words, the semantic and syntactic differences in the text, and the development of ideas over the course of the text (Coleman & Pimentel, 2011). The Juice's articles provide students with rigorous content, manageably chunked to allow them to practice and develop reading comprehension skills daily. To create the literacy capacities outlined by the National Assessment for Educational Progress (NAEP) and each state's college and career readiness standards, students need to read closely to reinforce the value of:

- Citing evidence and identifying logical inferences
- Determining central ideas and themes
- Analyzing how individuals, events, and ideas develop and interact
- Interpreting words and phrases
- Analyzing text structure
- Assessing point of view
- Integrating content from diverse sources
- Delineating and evaluating arguments

- Analyzing how different texts explore similar themes

The daily articles in The Juice allow students to practice these strategies as they read and build strong content knowledge through exposure to cross-curricular informational texts. This strategy helps teachers build literacy across the content areas for all students, including gifted students, striving readers, and English language learners.

SUPPORTING STUDENTS OF VARYING LEARNING PROFICIENCY

One of the biggest drivers of student motivation is whether or not students feel like they can succeed at the assigned task (Hulleman et al., 2016). However, students within a single class can have a wide range of reading levels. A widely accepted and research-validated principle is that students learn better when content is tailored to their individual needs (Tomlinson, 1999, 2004). Educators face increasing workloads and time constraints, making it challenging to provide students with targeted content regularly. The Juice's instructional approach aligns with the research showing students learn better when content is accessible for students of varying learning proficiencies (Tomlinson, 1999, 2004).

The Juice makes it easy to differentiate instruction by delivering the same grade-level-appropriate articles to students at four separate reading levels based on well-established readability indexes.

The Juice strengthens reading and builds literacy across the content areas for all students by providing customizable scaffolds and support for gifted students, striving readers, and English language learners. As a student's reading ability develops over time, educators can monitor performance and change a student's reading level within The Juice's Teacher Portal to provide additional rigor and text complexity, or to make articles more accessible and build reader confidence. The Juice can also automatically adjust a student's reading level based on performance data.

Based on well-established research on the importance of accommodating individual student needs, The Juice embeds vocabulary scaffolds and audio supports so students can listen along as they read informational texts (Kame'enui, Carnine, Dixon, Simmons, & Coyne, 2002; Rosenshine & Meister, 1992).

Each issue of The Juice includes 10+ in-context Tier 2 and Tier 3 vocabulary words that can be defined and pronounced aloud on demand. Studies have shown that middle and high school students reading below grade level can experience significant improvements in reading comprehension performance when they engage with instructional materials that develop their vocabulary through listening, in addition to reading (Curtis & Longo, 2001).

MAKING STUDENT LEARNING VISIBLE WITH INTEGRATED FORMATIVE ASSESSMENTS AND FEEDBACK

Students need feedback to grow. Teachers need feedback to identify student learning needs and adjust instruction accordingly (OECD, 2010). Each article in The Juice links to a standards-aligned higher-order formative assessment quiz question differentiated to each student's reading level. As students take quizzes on articles at the appropriate reading level, they should experience more success and feelings of confidence (Bandura, 1997). In addition, findings indicate that students who receive formative assessment perform better than their peers do (Hanover Research, 2014). The formative assessment questions in The Juice explicitly support skills in the ELA Reading Comprehension standards focusing on informational text mastery. While important to English language instruction, informational text mastery is critical to success across all content areas.

Formative feedback is instrumental to the learning process. It can effectively promote learning if it is timely, personal, manageable, motivational, and directly related to assessment criteria. If the feedback is timely, it can positively affect student motivation and self-esteem, leading to increased engagement in the learning process (Jawah et al., 2004). The Juice provides students with real-time feedback after answering each quiz question. When students answer a question correctly, they are congratulated. When a quiz question is answered incorrectly, students receive clear and instant feedback to help them understand the reasoning behind the correct answer. In this way, students can have a rich learning experience without any intervention from an educator.

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APPENDIX

Horizons Summer Program:

Horizons at Norwalk Community College is a tuition-free academic and enrichment program serving under-resourced students from the Norwalk, CT, community. The program runs for six weeks during the summer, and serves pre-K - 8th grade students.

At the beginning and conclusion of the program, reading specialist Caitlin Fernandez assessed all students on their reading skills using the STAR growth report. Rachel Zack's class read *The Juice* 3 times a week during the six week program. At the end of the program, the students in Zack's class exhibited the most significant growth in scores compared to every other class within the pre-K through 8th-grade program. "When we tested the students at the end of the program we found that students in Rachel's class achieved an average growth of 35 points or the equivalent of 1.5 years growth," said Fernandez. Zack attributed this growth to using *The Juice*. Read the full report [here](#).

Boys and Girls Club of Palm Beach County:

The Boys & Girls Club of Palm Beach County serves more than 13,000 children between the ages of 6-18 at 20 sites across Palm Beach County. The program used *The Juice* for six weeks during the summer with over 1,000 participants.

At the conclusion of the program, participants demonstrated increased enjoyment of reading and reported that they were more engaged in conversations about current events with family members. The number of students who reported at the start of the program that they disliked reading dropped from 12% to 7% in the post survey. Additionally, 32% of students who initially

had limited awareness of current events decreased to 16% by the program's end. Moreover, 22% of students reported a high level of current events knowledge at the conclusion, as opposed to 11% at the beginning. Read the full report [here](#).

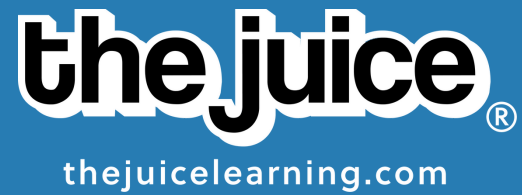
The Juice Logic Model

The Juice Logic Model explains how administrators, teachers, and students use The Juice, what they do with it, and the outcomes they can expect to realize. For the administrators and teachers who use The Juice, the Logic Model helps explain why using The Juice can result in more effective teaching, what the indicators of success will be, and what should be improved to increase efficacy moving forward.

Goal Statement: Provide students with relevant, meaningful, and timely nonfiction and current event content that spans the disciplines, encourages discussion, supports content knowledge, numerical literacy and critical thought, and builds overall reading comprehension and literacy skills.

Underlying conditions: Students and teachers have regular access to The Juice digital content on a consistent schedule of delivery.

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES	
			SHORT-TERM	LONG-TERM
<p>The Juice provides teachers and students:</p> <ul style="list-style-type: none"> - Digital access to differentiated current events articles, nonfiction texts, vocabulary, STEAM concepts, and infographics - Content that is grade and subject-focused and adheres to key anchor standards across relevant subjects - Daily SEL questions that help build empathy in students. - Formative assessments linked to the content of the texts for data-driven instruction - Additional instructional materials and resources 	<p>Teachers</p> <ul style="list-style-type: none"> - Teachers use The Juice across disciplines to support classroom curricula in whole class, small group, and independent settings <p>Students</p> <ul style="list-style-type: none"> - Students use The Juice to: <ul style="list-style-type: none"> · Learn about current events and specific topics · Practice relevant content and grade specific literacy skills · Develop their knowledge and literacy across disciplines - Students can access The Juice from home to extend learning beyond the school day 	<p>Teachers</p> <ul style="list-style-type: none"> - Teachers incorporate relevant, high-quality content from diverse focus areas into their practice <p>Students</p> <ul style="list-style-type: none"> - Students have access to diverse current events and nonfiction content, including practical information - Students have the opportunity to build: <ul style="list-style-type: none"> · reading comprehension · critical-thinking · background knowledge · graphical literacy · academic and domain vocabulary in connect · graphical literacy - Practice digital literacy and experience digital resources - Engage in topical discussions - Build social and emotional skills - Diverse readers (striving, ELL, gifted, special needs, etc.) are provided different entry points to literacy and content study - Students build the homeschool connection by sharing their experiences with The Juice with peers and family 	<p>Teachers</p> <ul style="list-style-type: none"> - Teachers across disciplines support literacy development - Teachers broaden learning goals to include peer-to-peer and home-to-school <p>Students</p> <ul style="list-style-type: none"> - Students increase their familiarity with different genres of content - Students increase their facility with graphical representations of information - Students are able to draw connections across disciplines - Students strengthen their fluency, vocabulary, comprehension, and critical thinking skills - Students experience an increase in proficiency in literacy skills, including across disciplines - Students use social and emotional skills to support their learning, decision making, and relationships 	<p>Teachers</p> <ul style="list-style-type: none"> - Teachers across disciplines effectively incorporate literacy instruction while simultaneously building content knowledge <p>Students</p> <ul style="list-style-type: none"> - Students exhibit strong reading comprehension, literacy and skill-based foundations across disciplines - Students display expansive content and current events knowledge - Students display strong critical-thinking skills - Students incorporate strong social and emotional competencies into their learning, decision making



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For more information about this research foundation paper, please contact
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SUGGESTED CITATION

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