BRAINFUSE EVIDENCE OF EFFECTIVENESS

BRAINFUSE ONLINE TUTORING PROGRAMS FOR K-12 STUDENTS

EFFECTIVENESS STUDIES
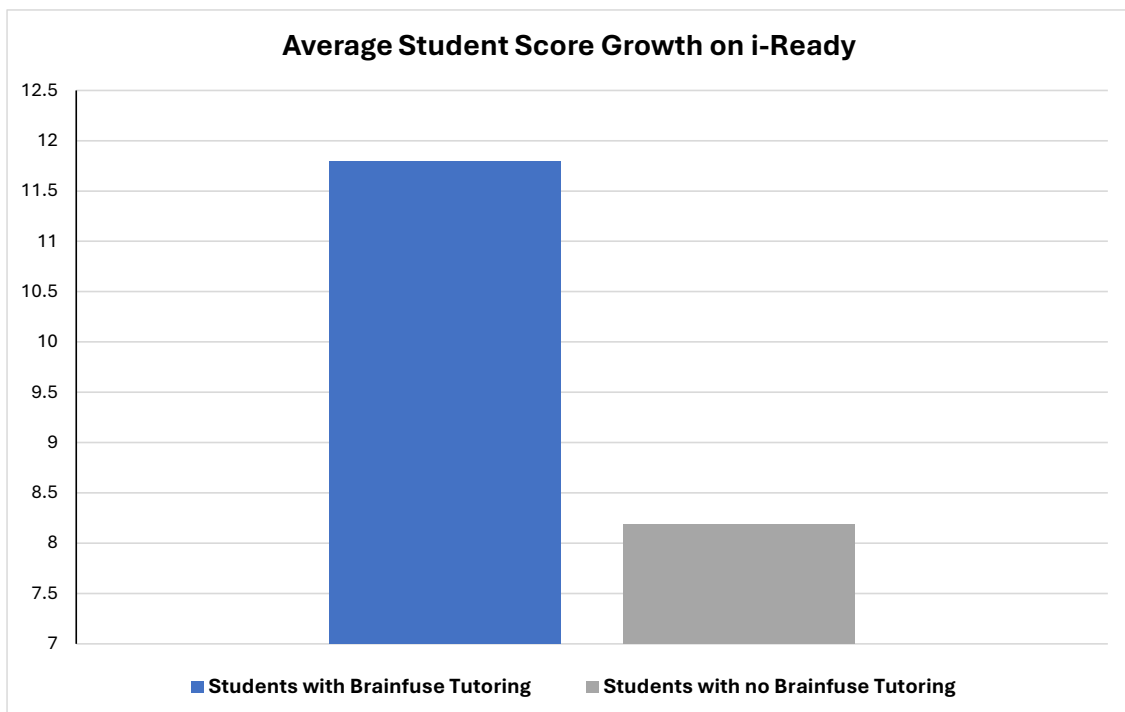
ESSA TIER 1: RANDOMIZED CONTROLLED STUDIES

The U.S. Department of Education designates ESSA Tier 1 as the highest standard for research and evidence-based interventions. Such studies often take years to produce since they require statistically significant numbers of participants and a well-established control group. To our knowledge, Brainfuse is one of the only nationally recognized tutoring providers to successfully demonstrate effectiveness in multiple ESSA Tier 1 studies.
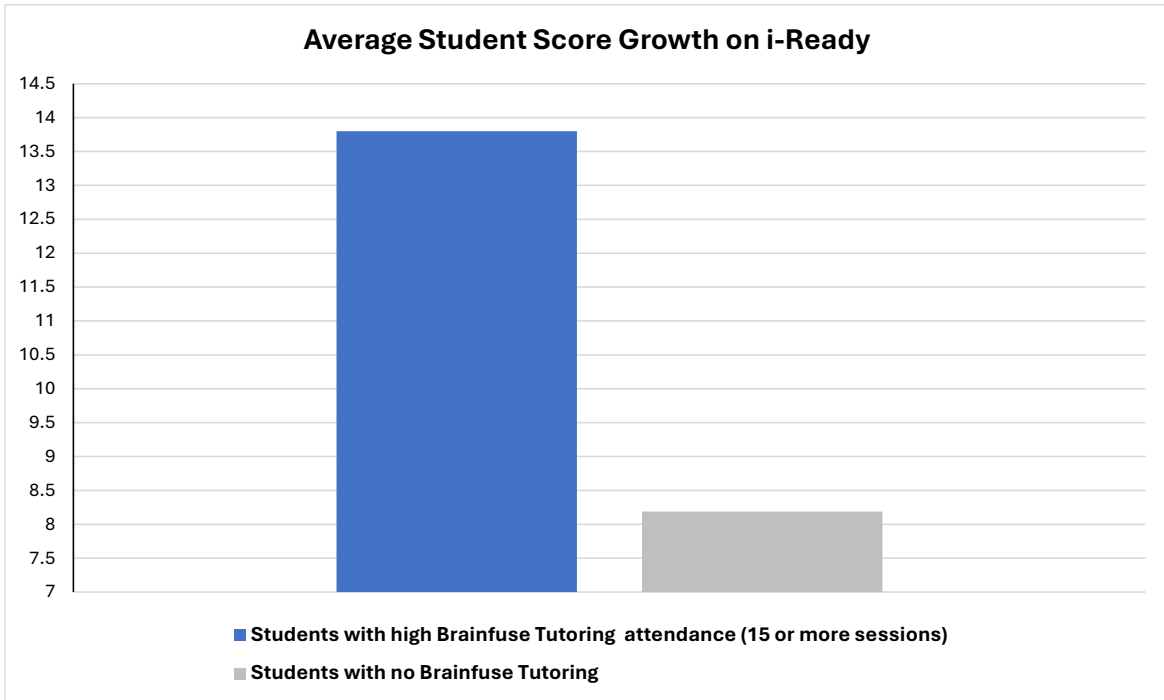
Indian Prairie School District Study

KEY FINDINGS: Brainfuse partnered with Indian Prairie School District to assess the growth and learning gains of students in mathematics as identified by third-party assessment scores. Students participating in Brainfuse saw at least 44% higher score gains, 31% greater typical growth, and improved their grade level placement at a higher rate than students without Brainfuse tutoring.
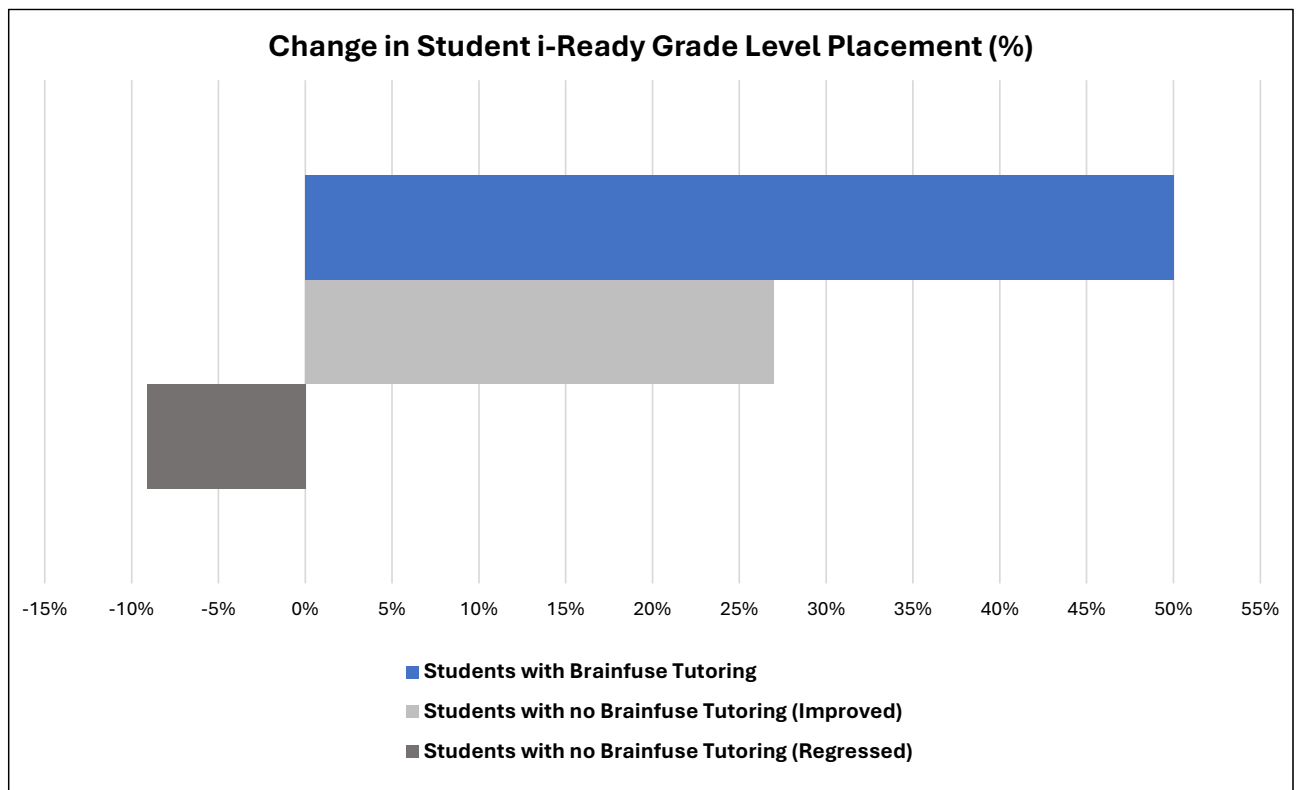
o **Higher Overall Score Gains on i-Ready:** Students with Brainfuse Tutoring had higher overall score gains: *44% higher* compared to students with no Brainfuse Tutoring.

Average Student Score Growth on i-Ready

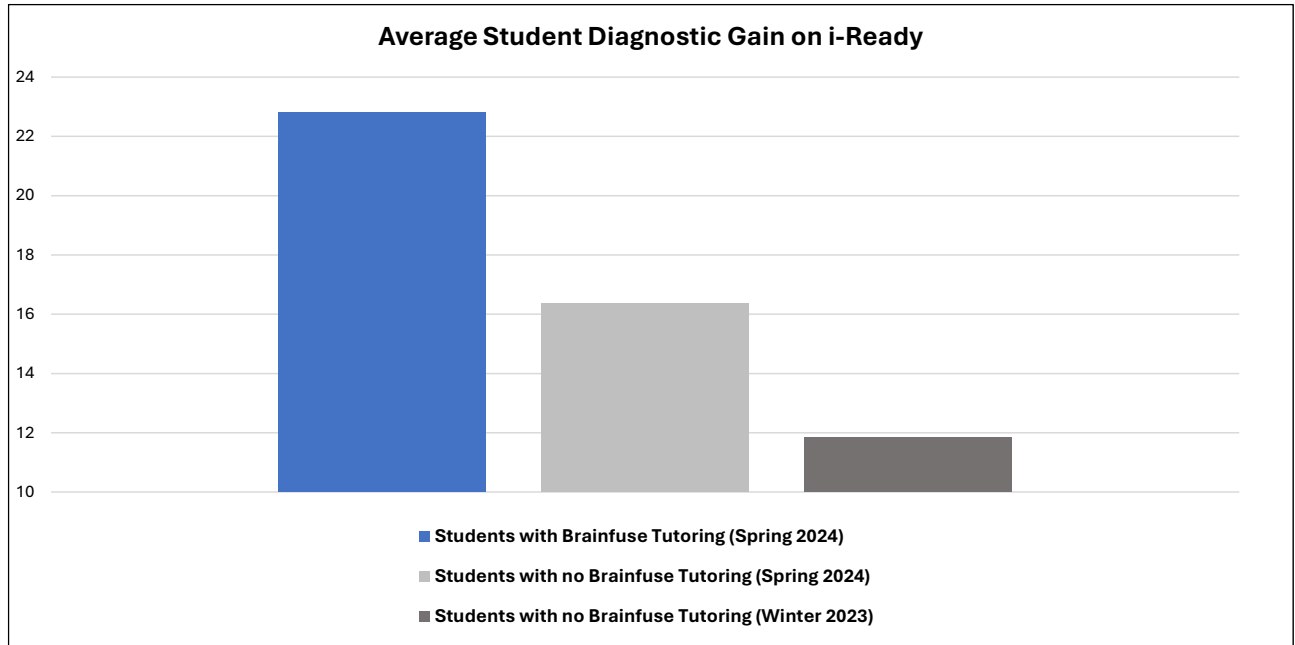■ Students with Brainfuse Tutoring   ■ Students with no Brainfuse Tutoring

- **High Attendance Improved Gains on i-Ready:** Students with high attendance in Brainfuse Tutoring (more than 15 sessions) had *overall score gains 68% higher* than students with no Brainfuse Tutoring.

Average Student Score Growth on i-Ready

- Students with high Brainfuse Tutoring attendance (15 or more sessions)
- Students with no Brainfuse Tutoring
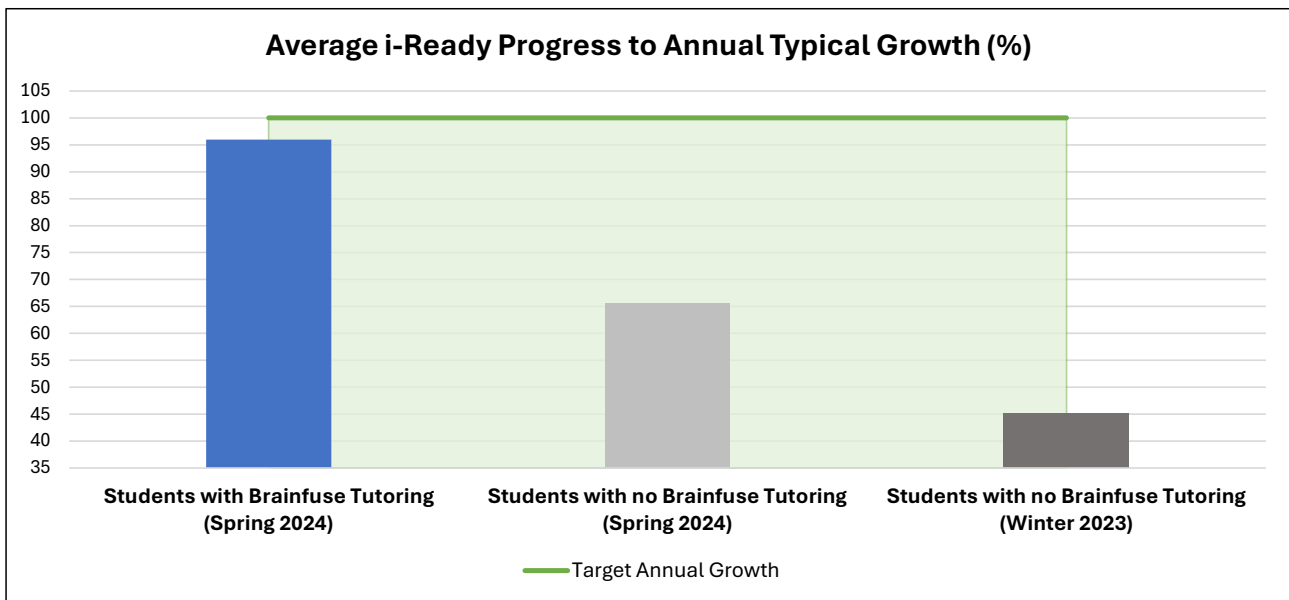
- **Improved Grade Level Placement:** Students with Brainfuse Tutoring improved their grade level placement by *23 percentage points higher* than students with no Brainfuse Tutoring.

Change in Student i-Ready Grade Level Placement (%)

- Students with Brainfuse Tutoring
- Students with no Brainfuse Tutoring (Improved)
- Students with no Brainfuse Tutoring (Regressed)

o **Boosted Diagnostic Gains:** Students with Brainfuse Tutoring achieved greater diagnostic gains on their i-Ready assessment, with Spring 2024 gains *54% higher* than students without Brainfuse Tutoring.
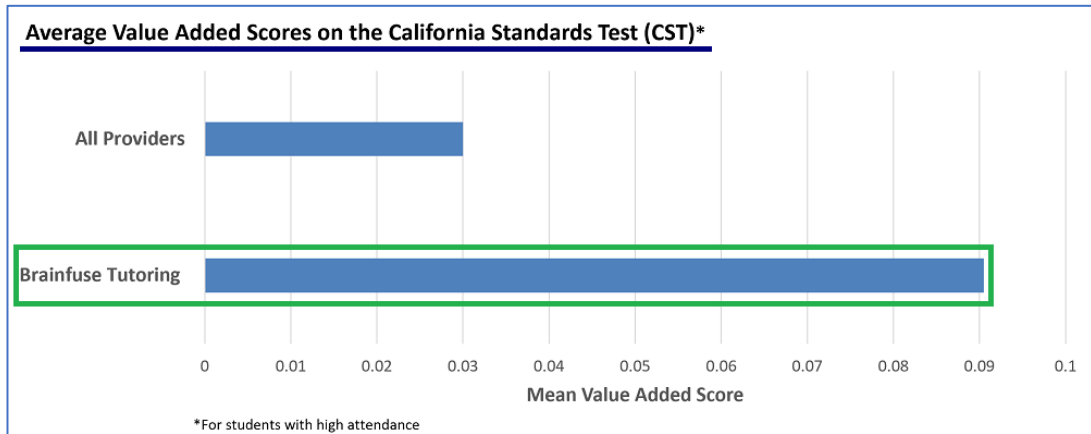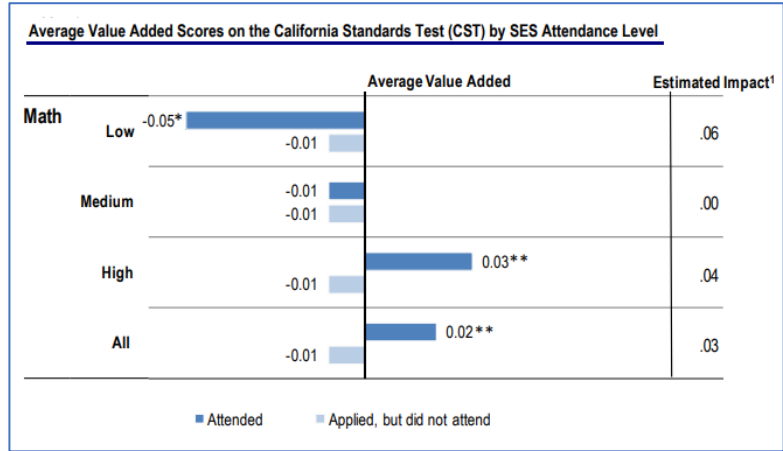
Average Student Diagnostic Gain on i-Ready

- ■ Students with Brainfuse Tutoring (Spring 2024)
- ■ Students with no Brainfuse Tutoring (Spring 2024)
- ■ Students with no Brainfuse Tutoring (Winter 2023)

o **Accelerated Annual Typical Growth:** Students with Brainfuse Tutoring had *31% higher* annual typical growth in their i-Ready assessment data than students who had no Brainfuse Tutoring.

    o Students with Brainfuse Tutoring achieved 96% of their annual typical growth, compared to 65% for students without Brainfuse.

Average i-Ready Progress to Annual Typical Growth (%)

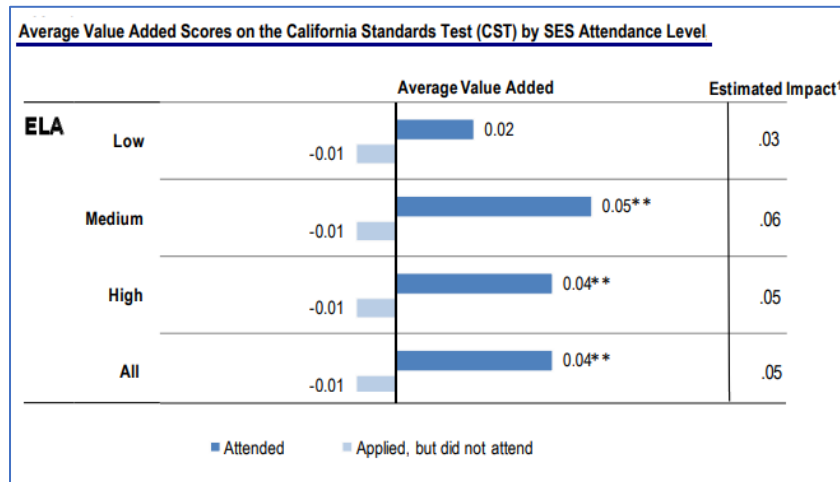| Students with Brainfuse Tutoring (Spring 2024) | Students with no Brainfuse Tutoring (Spring 2024) | Students with no Brainfuse Tutoring (Winter 2023) |

—— Target Annual Growth

Los Angeles Unified School District Study

KEY FINDINGS: The Los Angeles Unified School District Research Unit measured the academic progress of students who participated in supplemental educational services such as live online tutoring.

- o **Math:** The average value-added score for Brainfuse was almost *three times* as large as the average value-added score for tutoring providers as a whole.

Average Value Added Scores on the California Standards Test (CST) by SES Attendance Level

		Average Value Added	Estimated Impact[1]
Math	Low	-0.05* / -0.01	.06
	Medium	-0.01 / -0.01	.00
	High	0.03** / -0.01	.04
	All	0.02** / -0.01	.03

■ Attended   ■ Applied, but did not attend

Average Value Added Scores on the California Standards Test (CST)*

	Mean Value Added Score
All Providers	~0.03
Brainfuse Tutoring	~0.09

*For students with high attendance

- o **ELA:** As stated in the report, "In ELA, both the medium and high attendance groups had average value-added scores that were significantly higher than for the group of non-attendees" (Barnhart, 10).

Average Value Added Scores on the California Standards Test (CST) by SES Attendance Level

		Average Value Added	Estimated Impact[1]
ELA	Low	0.02 / -0.01	.03
	Medium	0.05** / -0.01	.06
	High	0.04** / -0.01	.05
	All	0.04** / -0.01	.05

■ Attended   ■ Applied, but did not attend

METHODOLOGY: The third-party research unit compared student-predicted math and ELA scores to actual scores through a value-added approach. Any deviation in the score not accounted for in the study's regression model was determined to be the value-added by each tutoring provider. With an N=51,254 across many tutoring sites and controlling for confounding factors, this study allowed comparisons across grade level, school location, and demographics. Additional analysis compared participant scores with non-participant scores and various attendance levels with non-attendance.

Colorado Department of Education Study

KEY FINDINGS: The OMNI Institute prepared a report for the Colorado Department of Education on tutoring providers' effectiveness in raising standardized test scores. Brainfuse was ranked first in this study in math and reading, with a math improvement rate of 30% and a reading improvement rate of 39.3%. As stated directly in the report:

- o **Math:** "Vendors with the highest improvement rates were Brainfuse One-to-One Instruction and Chancellor Supplemental Education Services with 30% and 21.1% improvement, respectively" (Omni Institute, 42).

- o **Reading:** "Vendors with the highest improvement rates were Brainfuse One-to-One Instruction and Advantage Tutoring Services with 39.3 and 33.3% improvement, respectively" (Omni Institute, 38).

Table 3.2: Math Achievement: Percentage of Students who Improved in Proficiency Categories and Median Growth Percentile by Vendor

Math Achievement		
Vendor	% Improved	Median Growth Percentile
Brainfuse One-to-One Instruction	30.0	50.0
Chancellor Supplemental Educ. Ser.	21.1	38.0
Advantage Tutoring Services	20.4	59.0
Education Station	19.6	54.0
A to Z In-Home Tutoring	18.2	59.5
Club Z!	16.7	51.0
Tutor Train	16.2	44.0
Controls	*15.9*	*47.0*
Santa Fe Trail BOCES	15.0	67.5
GOALS, Inc.	8.7	33.0
GEO Foundation	4.3	36.0

Table 3.1: Reading Achievement: Percentage of Students who Improved in Proficiency Categories and Median Growth Percentile by Vendor.

Reading Achievement		
Vendor	% Improved	Median Growth Percentile
Brainfuse One-to-One Instruction	39.3	62.5
Advantage Tutoring Services	33.3	52.0
Dept of Extended Learning	32.4	60.0
A to Z In-Home Tutoring	31.6	59.0
Club Z!	29.3	53.0
Summer Scholars	28.7	54.5
Read, Read, Read	27.8	52.0
GEO Foundation	26.5	47.0
GOALS, Inc.	26.1	52.0
Steps to Success	25.7	64.0
Education Station	23.9	45.0
Controls	*23.2*	*44.0*
Center for Hearing, Speech, & Lang	22.7	53.0
John Corcoran Foundation	21.7	43.0
Tutor Train	14.1	35.0
Chancellor Supplemental Educ. Ser.	13.6	34.5

METHODOLOGY: Through a controlled study, OMNI used a large dataset (N=3,632) of students across multiple locations and grade levels to examine the effectiveness of supplemental educational services provided by approved vendors on student achievement. The report compared testing scores in math and reading between students who received tutoring services and a matched control group. The analysis included improvement rates and the median growth percentile for students served.

Multi-State Effectiveness Study

For over a decade, Brainfuse has distinguished itself from other providers in terms of efficacy. Brainfuse improved student achievement in math, English Language Arts, and science across multiple states, grade levels, and demographics through a study completed by a third-party research unit.

KEY FINDINGS:

1. **Math:** In comparing pre-and post-test results, students increased their scores by an average of 8.27% after receiving Brainfuse tutoring services.

2. **Language Arts:** Comparing pre-and post-test results, students increased their scores by an average of 3.86% after receiving Brainfuse tutoring services.

3. **Science:** In comparing pre-and post-test results, students increased their scores by an average of 19.55% after receiving Brainfuse tutoring services.

METHODOLOGY: The Study measured student performance from 2018-to 2021 in twelve urban and rural school districts throughout the country:

- Anne Arundel County Public Schools, MD
- Baltimore County Public Schools, MD
- Broward County Public Schools, FL
- Chicago Public Schools, IL
- Columbus City Schools, OH
- Fort Bend Independent School District, TX
- Houston Independent School District, TX
- Los Angeles County Public Schools, CA
- Mukilteo School District, WA
- New York City Department of Education, NY
- Sacramento City Unified School District, CA
- San Francisco Unified School District, CA

Between 2018 and 2021, students from the above school districts accessed Brainfuse tutoring, tests, and content from library, school, and municipal portals via Brainfuse subscriptions. Students took pre-and post-tests in the respective subject areas and received Brainfuse online tutoring intervention services between their pre-and post-tests. The results above indicate the average percentage score increases in the respective subjects when comparing pre-and post-test results.

Student Satisfaction

A related, qualitative measure of effectiveness is student satisfaction. At the end of each tutoring session, students submit post-session surveys. The following table summarizes student survey responses for the past ten years:

POST-SESSION SURVEY	
Were you satisfied with this session?	98%
Would you recommend this service to a friend?	97%
Did this service help you complete your assignment?	96%
Is this service helping you improve your grades?	86%
Is this service helping you be more confident about your school work?	97%

Program Structure

Our high-dosage and high-impact tutoring programs are built around recent research and proven best practices to improve student learning gains. With these principles underpinning our services, Brainfuse provides programming flexibility to better meet the unique needs of each school or district's students, teachers, and administrators to foster student growth and ensure effective tutoring sessions:

2-3 Sessions per week	**Frequent Schedule:** As a standard, Brainfuse encourages 2-3 sessions per week for students, providing opportunities to develop positive student-tutor relationships to encourage learning gains.
30-35 min Session length	**Consistent Duration:** Regularly scheduled, shorter sessions support student engagement and participation in the designated lesson.
90%+ Tutor attendance and consistency	**Personalized and Targeted Support:** Students receive individualized support from familiar tutors to support productive sessions, improve confidence, and increase engagement.
thousands High-quality lessons in math, ELA, Social Studies, Science and more	**High-Quality Content:** Designed in-house by our experienced curriculum team of former educators and subject experts, the content available to students and used during sessions is developed with Universal Design of Learning principles to be relevant, age-appropriate, and aligned with state standards, learning expectations, and knowledge areas.
seamless Student and teacher access through existing platforms or credentials	**Integrated & Data-Driven:** Our in-house technical team ensures simple access to our intuitive platform and provides full session transparency to better align sessions with student needs.

REFERENCES

Barnhart, M. (2011). The impact of participation in supplemental educational services (SES) on student achievement: 2009-10 (Publication No. 379). LAUSD Research Unit.

O'Connor, E. (2022). A multi-state analysis of effective online tutoring for elementary, middle, and high school-aged students

OMNI Institute (2009). Evaluation of NCLB title I, part a: Supplemental educational services 2007-2008 academic year data. Colorado Dept. of Education.