CIGNITION IMPLEMENTATION

OHIO DEPARTMENT OF EDUCATION

Grades: K - 5
Content Area: Foundational Literacy
Program Length: 8 Months
Treatment Year: 2023-2024

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1.0 — Introduction

1.1 — Background

Future Forward Ohio Initiative Overview

Under the **Future Forward Ohio (FFO)** initiative, the Ohio legislature allocated $26.1 million in Governor's Emergency Education Relief (GEER) funds to establish high-dosage tutoring programs across districts and schools in Ohio. The funding aimed to address learning loss in mathematics and English Language Arts (ELA) caused by school closures during the COVID-19 pandemic.

This statewide initiative was administered by the **Ohio Department of Education (ODE)**, which identified six High-Quality Tutoring (HQT) providers, including Cignition. Ohio districts and schools were invited to submit a **Request to Participate (RTP)** form. Schools were prioritized for selection based on their students' standardized test performance, specifically the learning loss differential from pre-pandemic levels to the FFO initiative's launch.

Vendor Selection and Program Participation

Selected schools reviewed documentation and met with representatives from HQT providers to determine the best fit for their needs. Most schools were able to partner with their preferred provider. To participate, schools had to meet the following requirements:

- Assign a staff member to serve as the liaison between the school and the provider and oversee program implementation.

- Offer tutoring sessions during the school day whenever possible (exceptions require approval from ODE staff).

- Adhere to the provider's recommended dosage, typically a minimum of 3 sessions per week, 30 minutes per session, over 15 to 30 weeks.

- Use student-level data to identify eligible participants and evaluate program outcomes.

Funding and Seat Allocation

Schools were awarded program "seats" (student participation slots) based on a comparative analysis of their assessment data from 2019 to 2022. Schools demonstrating the most significant learning loss were prioritized and received

most or all the seats they requested. Once seats were allocated, schools used local student data to select participants.

Program Implementation Timeline

The program targeted a launch date of **October 2, 2023**. Cignition began Foundational Literacy sessions in October 2023, with 4 districts/schools starting that month and another 6 launching in November. An additional 3 districts/schools joined in 2024, including two in January, one in February, and one in March. Among these, 2 districts transitioned from another provider to Cignition after their initial implementation fell short of expectations. One district opted for a late start.

Most programs concluded by **May 31, 2024**, though Ohio Connections Academy extended tutoring into the summer under the same grant. A full list of districts and schools served by Cignition through the FFO initiative is provided in Appendix A.

Results and Impact

Cignition's high-dosage tutoring model aligned with the FFO initiative's goals by delivering targeted support to students with the greatest needs.

Program Outcomes:

- **Student Growth in Reading:**

  - Students receiving **40-50 hours of tutoring achieved an average of 17.8 months of reading growth**, significantly exceeding typical annual progress.

  - Across all students, **each hour of tutoring yielded an average of 0.41 months of reading growth, translating to approximately 2.5 hours of tutoring per month of progress.**

- Engagement and Attendance:

  - **95%** of students met or exceeded the attendance standard of **70%,** with an average attendance rate of **89.5%** across all sessions.

  - Students consistently reported high confidence in their tutors and group members, as well as their ability to persevere through challenges.

- Student Survey Feedback:

  - 92.6% of student survey responses were positive, with **74.9% of students meeting or exceeding** the survey positivity standard of **90%.**

- **Participation and Mastery:**

  - The average participation score was **89.5%, with 77.1% of students meeting or exceeding the 80% standard.**

  - Students demonstrated meaningful progress in decoding and reading comprehension, with baseline-to-final mastery checks showing steady improvement across standards.

1.2 — Program Design and Description

Session Structure and Delivery

Tutoring sessions were conducted online via Zoom, with most students accessing their sessions using Chromebooks. Lessons were delivered through a collaborative digital platform that included interactive activities and manipulatives, fostering hands-on engagement. Sessions were scheduled consistently, with fixed times and days each week, to promote attendance and establish a routine.

Each session lasted between **30 and 35 minutes (median: 30 minutes**, mean: 30.3 minutes) and occurred **2 to 5 times per week**, depending on the local program's implementation. The goal was to achieve a **4:1 student-to-tutor ratio**, though the actual average ratio was 3.1:1 due to intentionally smaller group sizes for younger students. Tutoring was offered in 13 schools across 10 districts, serving 343 students in 43 classes and 116 individual groups.

Student Grouping

To maximize the effectiveness of instruction, school leaders formed **homogeneous groups of four students** using local data. Groups were occasionally restructured to maintain homogeneity as needed. All groups were composed of students from the same grade level.

Curriculum and Assessment for Foundational Literacy Skills

For K-3 ELA students (and older students focusing on foundational reading skills), the program utilized [Phonics Hero](#) as the primary curriculum, supplemented by lessons created by the Curriculum and Instruction (C&I) team.

Initial Assessment and Curriculum Structure

- Students began with the **Phonics Hero Placement Test**, which assessed their instructional reading level to determine the appropriate starting point.

- The systematic phonics-based curriculum consisted of [26 levels](#), structured as follows:
    - **6 levels for kindergarten**
    - **6 levels for first grade**
    - **7 levels for second grade**
    - **7 levels for third grade**

This progression was designed to support individualized skill development tailored to each student's needs.

Instructional Process

1. **Phonics Hero Instruction:** Each lesson began with Phonics Hero, focusing on phonics and fluency skills necessary for reading success.

2. **Baseline Mastery Checks (Reading Foundations)**: After completing Phonics Hero, students were assessed using RF.x.3 Mastery Checks to evaluate their ability to recognize words and read sentences fluently.

3. **Decodable Stories**: Students who demonstrated phonics proficiency progressed to reading decodable stories, where they engaged with baseline Mastery Checks for **RL (Reading Literature)** or **RI (Reading Informational Text)** standards.

4. **Concept Instruction:** Following the RL or RI baseline Mastery Check, students reread the story or read an additional decodable story, focusing on RL or RI concepts such as comprehension, themes, or supporting details.

Measuring Growth

Student growth in foundational reading skills was tracked through changes in their reading levels over the course of the program.

- Example: A student starting at **Level 4** and progressing to **Level 10** demonstrated **one year of reading growth.**

- This growth reflects the program's emphasis on structured skill development and fluency to support accelerated literacy advancement.

Attendance and Funding Accountability

The **Ohio Department of Education (ODE)** funding model required state funds to be paid only for services rendered. As a result, school districts bore the cost of "empty sessions" where no students attended. To address this, Cignition program managers monitored attendance and notified designated school contacts if a session was empty more than five minutes after its scheduled start time. This proactive approach significantly improved session attendance rates.

1.3 — Local Program Variation

Although the tutoring program adhered to the guidelines and seat numbers established by the **Ohio Department of Education (ODE)**, local school districts implemented the initiative in diverse ways. Program sizes ranged from as few as **3 students at Zane Trace Local Schools** to as many as **69 students at Delaware City Schools.**

Variety of School Environments

The participating schools represented a wide range of educational settings, including:

- **Traditional classrooms**
- **Public charter schools** (e.g., Bridges Preparatory Academy)
- **Faith-based, nonpublic schools** (e.g., St. Paul School in Salem)

Despite the uniform constraints required by ODE, such as consistent scheduling and adherence to tutoring dosage recommendations, this diversity created significant variation in program execution.

2.0 — Data Collection

2.1 — Introduction

Data for this program was collected across two primary categories: **student engagement and academic progress**. Information was gathered through automated systems, tutor input, and student feedback. District leadership and school personnel had on-demand access to all collected data via our teacher portal. Reports summarizing the data were regularly compiled and shared with state, district, and school leadership teams to ensure transparency and inform decision-making.

2.2 — Engagement Metrics

Student engagement was assessed using four key indicators: **attendance percentage, participation, contact hours**, and **student feedback surveys.**

Attendance Metrics

- **Attendance Percentage:** The percentage of scheduled sessions a student attended.
- **On-Time Arrival:** The percentage of sessions a student joined within the first five minutes.
- **Contact Hours:** The total hours a student spent in sessions with a Cignition tutor and their group.

Tutor Feedback

Tutors provided daily input on student engagement using three measures:

1. **Persevered with Tasks**
2. **Listened Actively to Peers and Tutor**
3. **Participated in Discussions**

Tutors scored students on a five-point Likert scale, measuring the percentage of session time a student engaged in each activity:

- 0% of the session time
- 25% of the session time
- 50% of the session time
- 75% of the session time
- 100% of the session time

An overall **participation score** was calculated as the average of the three category scores. Additionally, tutors provided **narrative comments** detailing each day's session, highlighting student progress and misconceptions.

Student Feedback

Students completed a brief survey during the final minute of each session, using a four-point Likert scale:

- **Strongly Agree**
- **Somewhat Agree**
- **Somewhat Disagree**
- **Strongly Disagree**

To enhance clarity for **Kindergarten through 4th-grade students**, descriptive emojis were added to the scale. The survey measured four engagement categories:

1. **Tutor Relationship:** "My tutor talks to me about my work to help me understand my mistakes."
2. **Collaborative Learning:** "I take turns, listen to, and work with others in my session."
3. **Conceptual Understanding:** "Right now, I understand more of what we covered than when we started."
4. **Productive Struggle/Growth Mindset:** "I don't give up when the material is challenging."

2.3 — Academic Progress Metrics

Foundational Reading Skills (Standard RF.x.3)

The Foundational Literacy program uses a phonics-based curriculum with 26 reading levels. Advancing through **6-7 levels typically represents one year of reading growth**. The program is designed to achieve accelerated growth, allowing students to advance by **two years (12-14 levels)** within **a single school year**. Achieving this ambitious goal **requires 50 hours of tutoring per student**.

To meet these benchmarks, students must demonstrate an **average gain of 0.48 months of reading growth per contact hour.**

Reading Literature (RL) and Reading Informational Text (RI)

Cignition emphasizes **conceptual mastery**, addressing individual standards across multiple sessions to ensure deep and sustained understanding. This iterative approach helps students build and reinforce their skills over time.

Progress toward RL and RI standards is assessed through **mastery checks** designed by the **Curriculum and Instruction (C&I) team**. These assessments are embedded within lessons and follow a structured cadence to ensure consistent evaluation.

Mastery checks serve three key purposes:

1. **Baseline Assessment:** Establishes the student's starting point.
2. **Instructional Guidance:** Guides adjustments to the instructional approach.
3. **Final Mastery Measure:** Records the highest score from subsequent checks as the final measure of mastery.

Criteria for Mastery

Tutors directly observe and evaluate mastery during sessions based on the following criteria:

- **Correct Answer:** The student provides the correct response.
- **Text Evidence:** The student supports their response with evidence from the text.
- **Explanation:** The student explains their thinking process.

3.0 — Data Analysis

Our data collection focuses on two main categories: **Engagement** and **Academic Progress.**

- **Engagement Metrics:** These metrics evaluate the program's overall health and effectiveness, both collectively and individually. We operate under the premise that students who are **present and engaged** are more likely to learn effectively, while disengaged or absent students face diminished learning outcomes. Engagement data enables teachers, administrators, parents, and program managers to identify students and programs requiring intervention.

- **Academic Progress:** This category assesses a student's ability to **demonstrate mastery** of a topic. Tutors evaluate not only the correctness of answers but also the **process students use to arrive at their answers** to ensure a deep understanding of the material.

Engagement Metrics

We measured engagement using four key indicators:

1. **Attendance:** Percentage of scheduled sessions attended by the student.
2. **Participation:** Student involvement during sessions, as rated by tutors.
3. **Student Feedback:** Positive responses to end-of-session surveys.
4. **Contact Hours:** Total time spent in tutoring sessions.

Baseline Metrics for Healthy Engagement

Based on prior experience and research, we established the following baseline metrics as indicators of **healthy engagement**, which is essential for achieving academic gains:

1. **Attendance:** 70% or higher
2. **Participation**: 80% or higher
3. **Student Feedback:** 90% or higher positive ratings
4. **Contact Hours:** 50 hours per school year

Contact Hours Insight: The baseline for contact hours is drawn from the [Design Principles for Accelerating Student Learning with High-Impact Tutoring](), a meta-analysis by the **Annenberg Institute at Brown University**. However, achieving this benchmark is often challenging due to time constraints within the school day and competing demands on students' schedules. As a result, for this analysis, we used **25 hours** as the practical standard based on actual student averages.

Engagement and Academic Progress Correlation

Using these baseline metrics, we theorize that students meeting the following criteria will achieve greater academic progress:

- **70% or higher attendance**
- **80% or higher participation scores**
- **90% or higher positive student survey responses**
- **25 or more contact hours**

These standards were used as goals to monitor and measure student engagement on a weekly basis. The regular analysis allowed for timely adjustments to increase engagement and improve overall program outcomes.

3.1 — Student Participation Metrics

3.1.1 — Attendance

The average student attendance rate across all scheduled Foundational Literacy tutoring sessions was **89.5%**, exceeding the baseline standard of **70%** for healthy engagement. Additionally, **95% of students met or exceeded** this attendance standard, indicating strong overall participation in the program.

STUDENT ATTENDANCE BY PERCENTAGE

60%-70%
3%

Less than 60%
2%

70%-80%
11%

90%-100%
51%

80%-90%
33%

■ 90%-100% ■ 80%-90% ■ 70%-80% ■ 60%-70% ■ Less than 60%
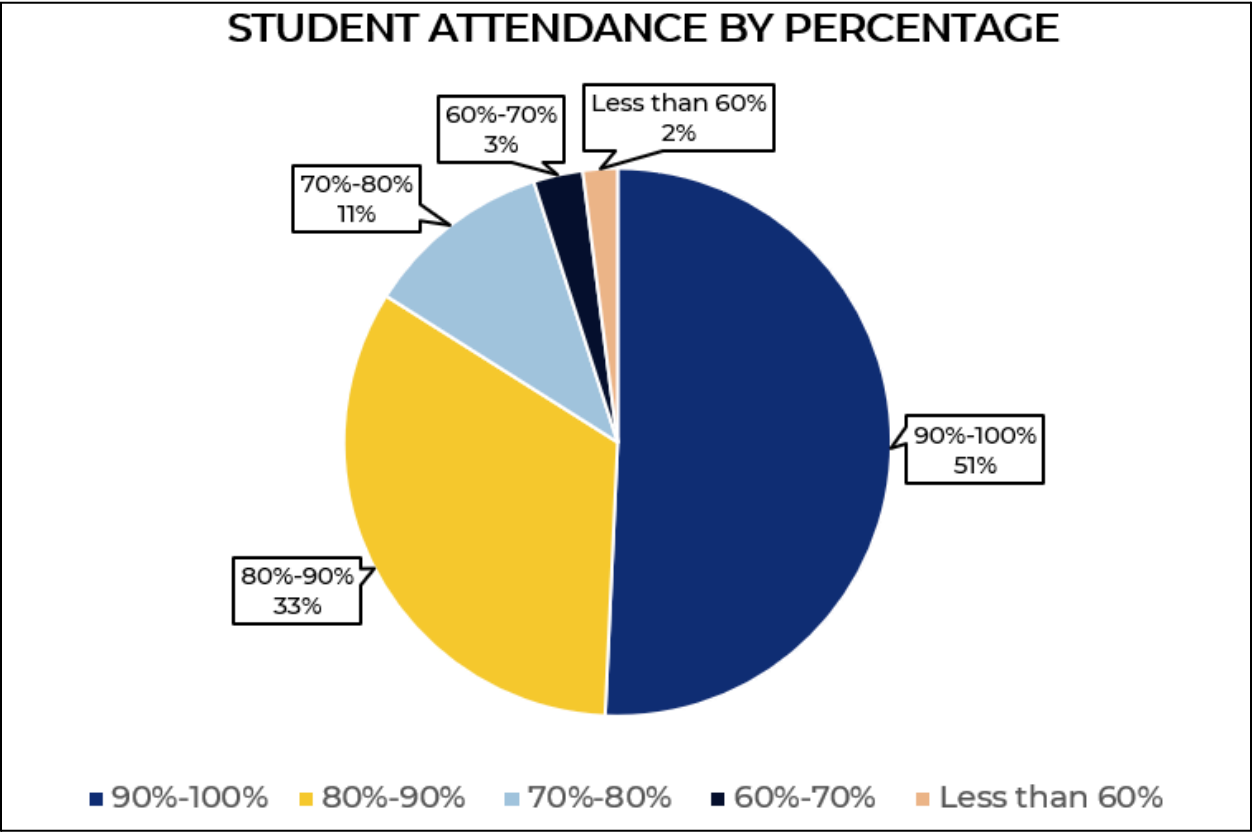
3.1.2 — Contact Hours

The program set a goal of **50 contact hours** for the entire school year, or **25 hours per semester,** as outlined in the initial program design. However, several factors impacted the ability to meet this goal:

- **State Funding Requirements:** The mandated program launch date of **October 2, 2024**, or later, reduced the available instructional time.

- **Local Logistics:** Delays in program start dates and early terminations further shortened the instructional period.

As a result, students received a mean of **25.1 instructional hours**, with a median of **19.5 hours**. These reduced contact hours highlight the challenges in aligning program goals with real-world implementation constraints.

CONTACT HOURS BY STUDENT

More than 40 hours 10%
30-40 hours 17%
20-30 hours 20%
10-20 hours 34%
Less than 10 hours 19%

Legend: More than 40 hours ▪ 30-40 hours ▪ 20-30 hours ▪ 10-20 hours ▪ Less than 10 hours
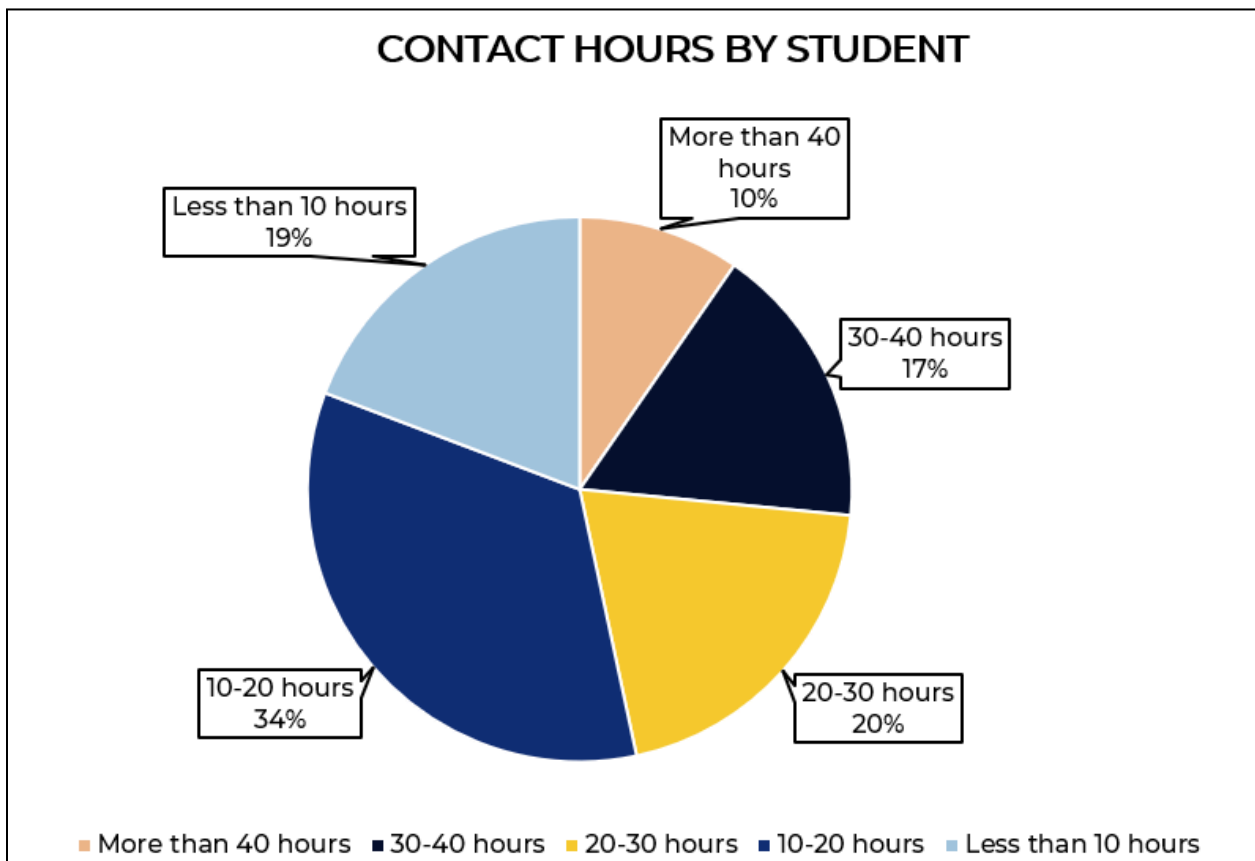
3.1.3 — Participation

The average student participation score across all scheduled sessions was **89.5%**, reflecting a high level of engagement during tutoring sessions. However, **79% of students** met or exceeded the participation standard of **80%**, indicating room for improvement in ensuring all students reach the expected engagement level.

STUDENT PARTICIPATION BY PERCENTAGE

Less than 60% 5%

60%-70% 5%

70%-80% 11%

80%-90% 21%

90%-100% 58%

■ 90%-100% ■ 80%-90% ■ 70%-80% ■ 60%-70% ■ Less than 60%
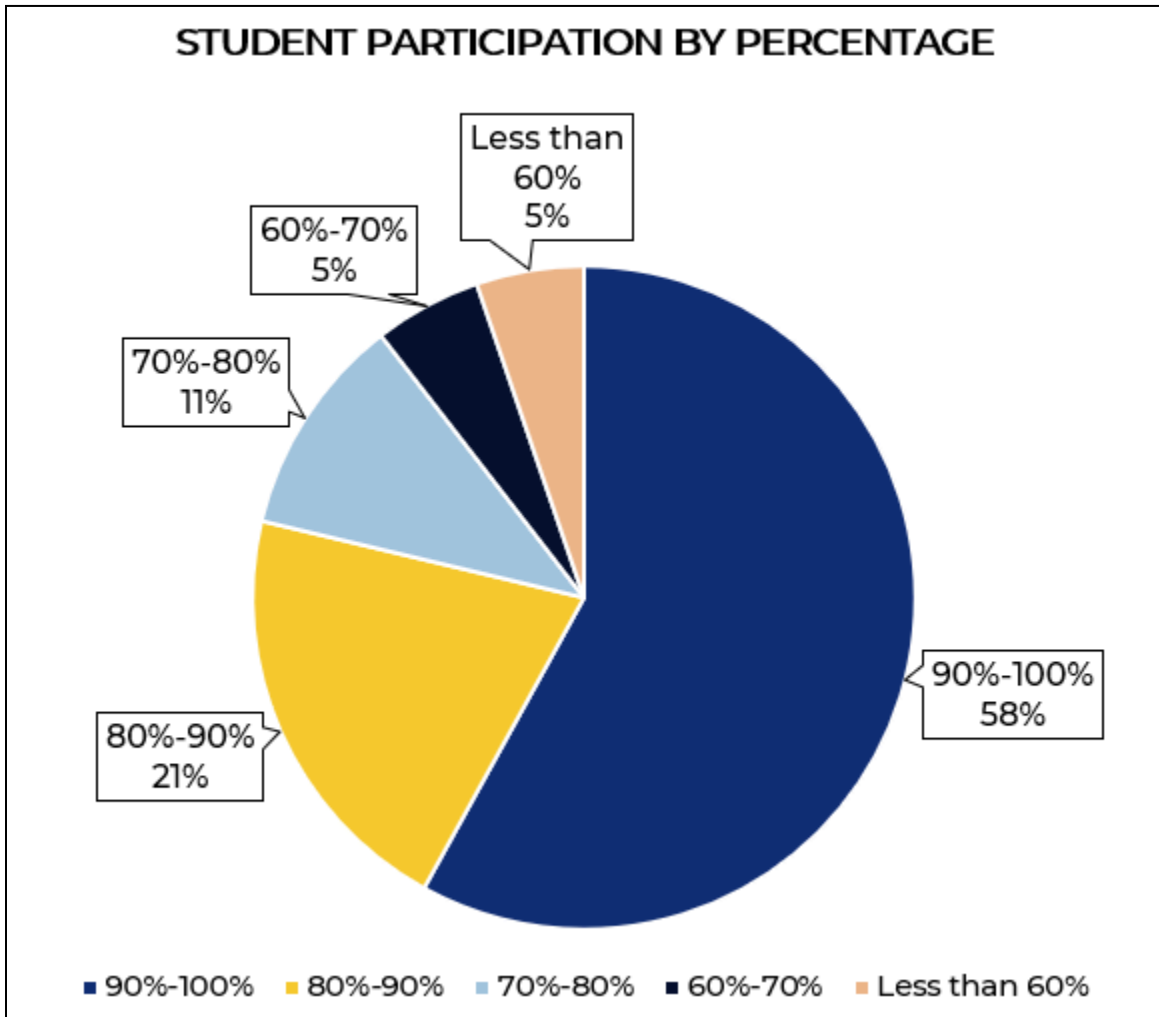
3.1.4 — Student Survey

The program set a goal for students to respond positively (either "**Strongly Agree**" or "**Somewhat Agree**") on **90%** of survey questions, averaged across the four questions presented at the end of each session.

- **Overall Results**: **92.6%** of responses from Ohio students were positive, exceeding the program's target.

- **Student-Level Results**: **74.9%** of students met or exceeded the **90% positivity standard**, indicating strong overall satisfaction and engagement, though some students fell short of the benchmark.

This metric reflects the program's success in fostering a positive learning environment while highlighting opportunities to further support students who may need additional engagement.

STUDENT SURVEY

	Strongly Agree	Somewhat Agree
Tutor Relationship	81.7%	13.4%
Collaboration	75.6%	17.8%
Conceptual Understanding	72.8%	17.9%
Productive Struggle	75.3%	15.7%
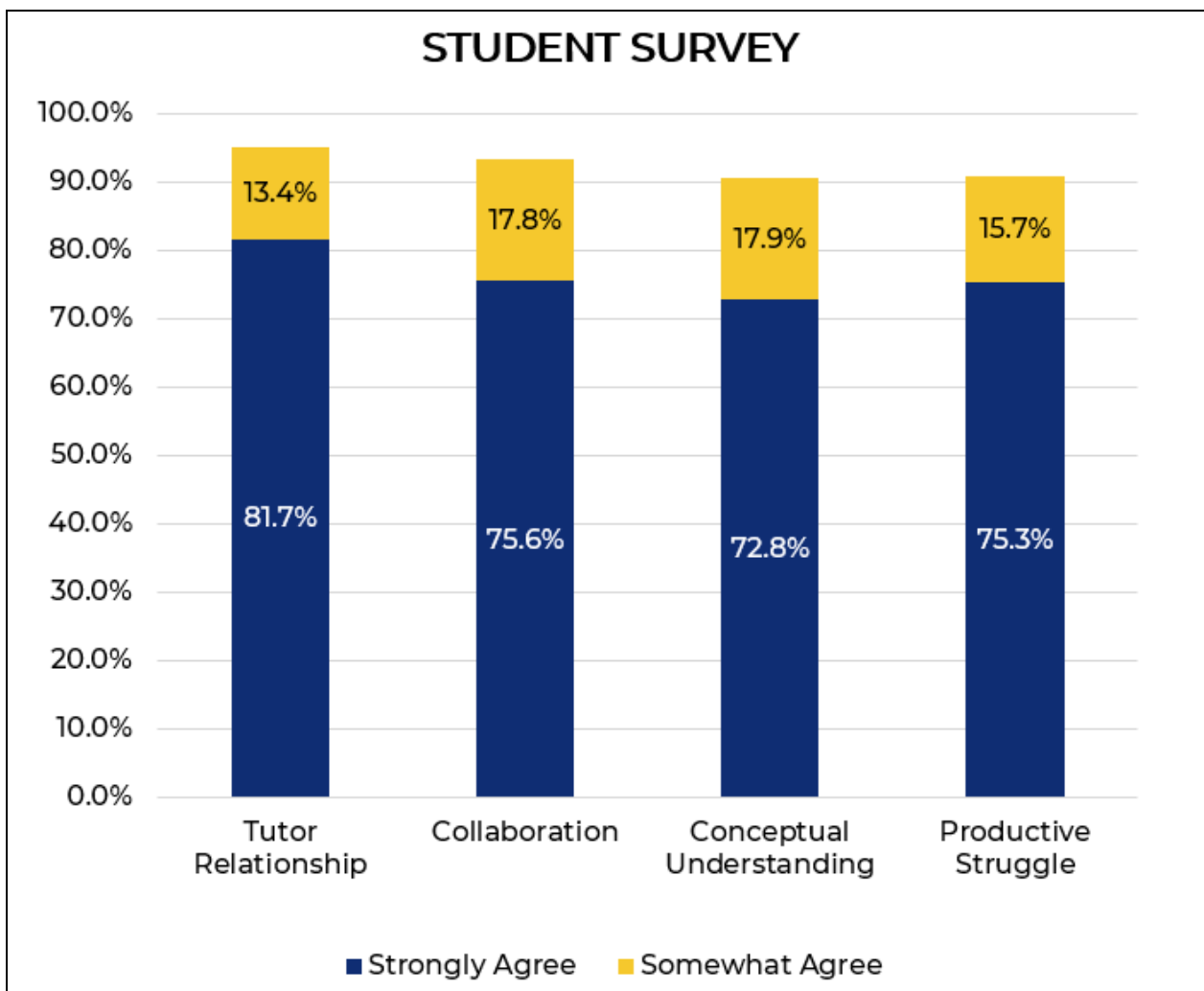
3.2 — Student Progress Metrics

As detailed earlier, the Foundational Literacy Program measures growth through a phonics-based curriculum with 26 reading levels. One year of growth typically involves advancing 6-7 levels, while the accelerated target of 12-14 levels within a school year aligns with 50 hours of tutoring and an average gain of 0.48 months of reading growth per contact hour.

Data analysis showed that **each hour of tutoring yielded an average of 0.41 months of reading growth**, equivalent to approximately 2.5 hours of tutoring per month of reading growth.

3.2.1 — Distribution of Student Growth Rates

Student progress in Ohio varied, with the following distribution of growth rates:

- **41.7%** of students reached or exceeded the target, gaining **0.48 months or more** of reading growth per contact hour.

- **16.5%** of students gained between **0.40 and 0.47 months** per contact hour.

- **14.2%** of students gained between **0.30 and 0.39 months** per contact hour.

- **15.0%** of students gained between **0.20 and 0.29 months** per contact hour.

- **12.6%** of students gained less than **0.20 months** per contact hour.

These results highlight a range of outcomes, with nearly 42% of students achieving or surpassing the ambitious growth target. The data also underscores the variability in student progress, emphasizing the need for targeted interventions to support those who fall below the expected growth rate.
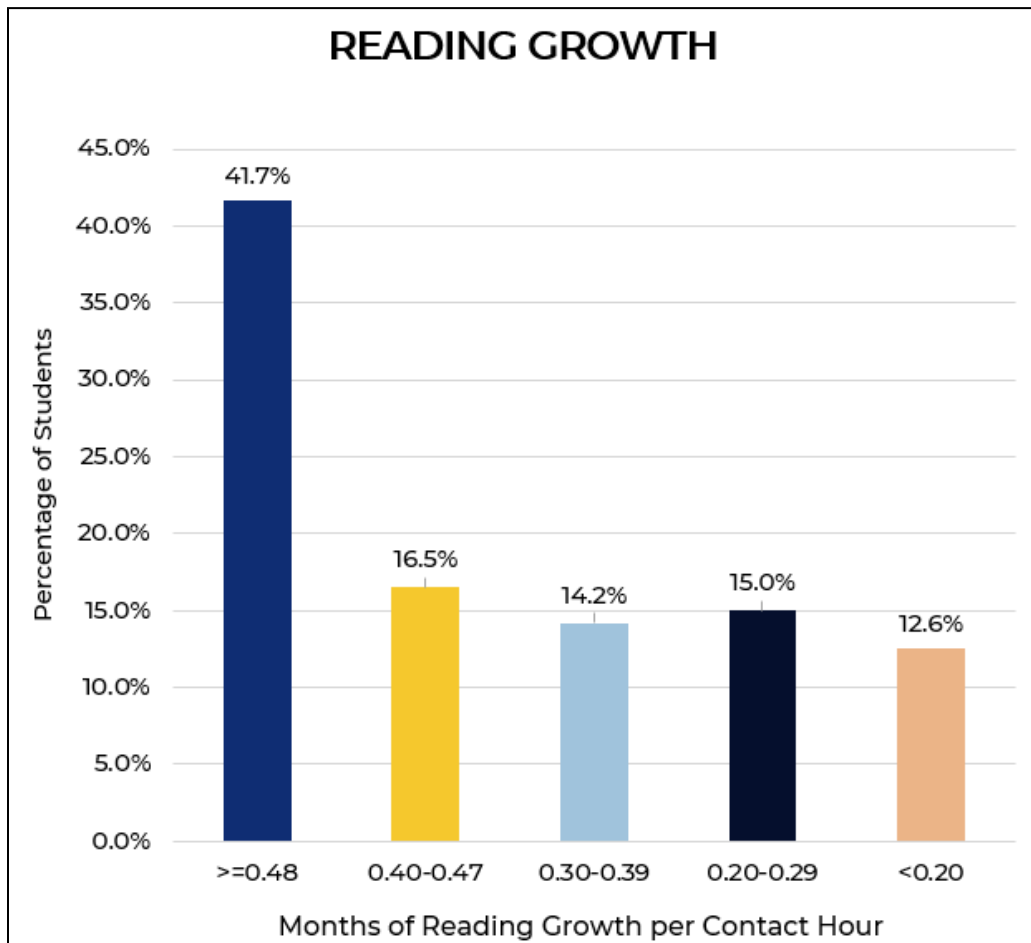
3.2.2 —Contact Hours vs. Reading Foundational Skills Growth

Students who received between **40 and 50 hours** of Cignition tutoring—combined with their schools' core instruction—achieved an impressive **average of 17.8 months of reading growth**, demonstrating the program's effectiveness in accelerating literacy development.

AVERAGE READING GROWTH BY CONTACT HOURS

Contact Hours	Average Reading Growth (Months)
40-50 hours	17.8
30-40 hours	15.1
20-30 hours	10.9
10-20 hours	6.5
0-10 hours	2.5
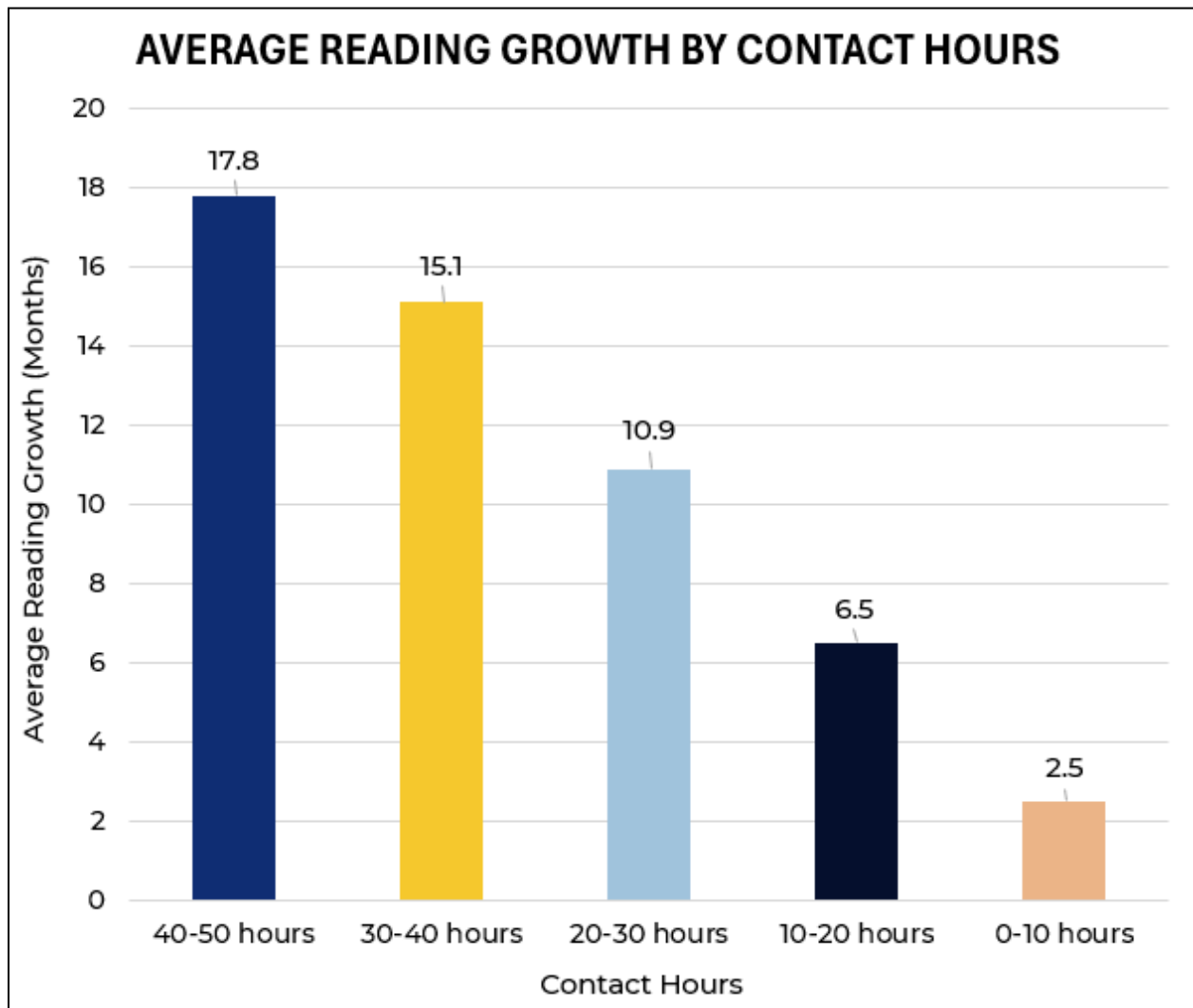
3.2.3 — Attendance and Participation vs. Reading Foundational Skills Growth

Attendance and Reading Growth

The data indicates a clear relationship between **attendance rates** and **average reading growth**:

- **90%-100% attendance:** Students achieved the most significant growth, **averaging 10.2 months of growth**.

- **80%-90% attendance:** Students averaged **8.6 months of growth.**

- **70%-80% attendance**: Students averaged **7.7 months of growth.**

- **<70% attendance:** Surprisingly, students averaged **8.1 months of growth,** slightly exceeding the progress of those in the 70%-80% range.

The anomaly in the <70% attendance group may reflect unique circumstances, such as individual variability in engagement, instructional strategies, or external factors influencing outcomes.

Participation and Reading Growth

Participation data presented an unexpected pattern:

- Students with **<70% participation** demonstrated the **highest average growth**, while those in the **90%-100% participation range** showed comparatively lower growth.

This counterintuitive trend may be influenced by how participation rates are assessed and recorded.

Factors Influencing Participation Data

Several factors may explain these results:

1. **Subjective Assessment by Tutors**
   Tutors assign participation scores based on subjective evaluations, which may favor students who demonstrate effort despite struggling with the material:

   - **Perseverance:** Students facing significant challenges might receive higher ratings for their persistence.

   - **Active Listening:** Struggling students engaging deeply to overcome difficulties may be rated higher.

- ○ **Participation in Discussions:** Tutors may encourage lower-performing students to participate more frequently, boosting perceived participation.

2. **Engagement vs. Outcomes**
Participation scores may not fully reflect behaviors that directly contribute to measurable growth, such as skill mastery or concept application.

3. **Bias in Assessment**
Tutors may unconsciously rate struggling students higher to acknowledge their effort rather than actual engagement behaviors.

4. **Differentiated Instruction**
Students with lower participation rates may receive more targeted or individualized instruction, potentially driving greater growth despite lower participation scores.

ATTENDANCE AND PARTICIPATION VS. READING GROWTH

Attendance Range	Attendance	Participation
90%-100%	10.2	8.7
80%-90%	8.6	9.3
70%-80%	7.7	10.5
<70%	8.1	11.2

Y-axis: Average Reading Growth (Months)
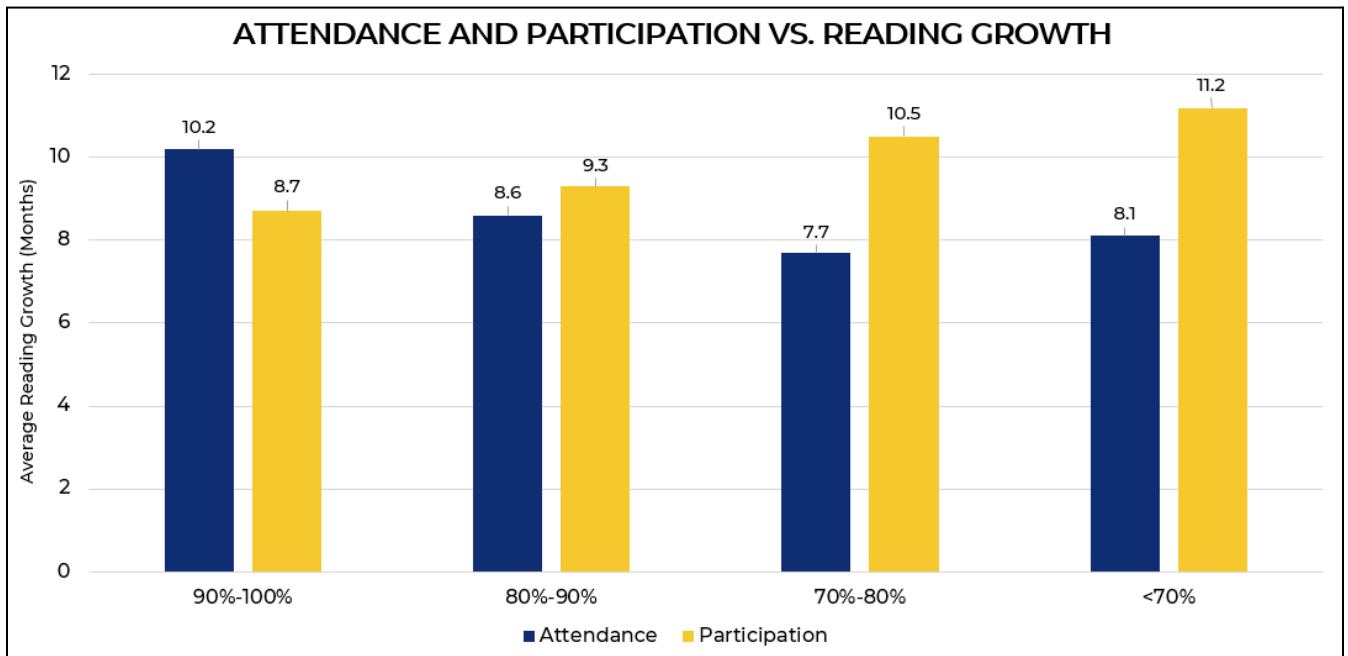
3.2.4 — Student Survey vs. Reading Foundational Skills Growth

Overview of Survey Categories and Growth

The bar chart illustrates **average reading growth in months** across four survey categories:

1. **Tutor Relationship**
2. **Collaboration**
3. **Conceptual Understanding**
4. **Productive Struggle**

The data is grouped by survey percentages: **<70%, 70%-80%, 80%-90%**, and **90%-100%.**

While higher survey percentages might be expected to correlate with greater reading growth, the data reveals variability, particularly within the **70%-80%** and **80%-90% ranges**.

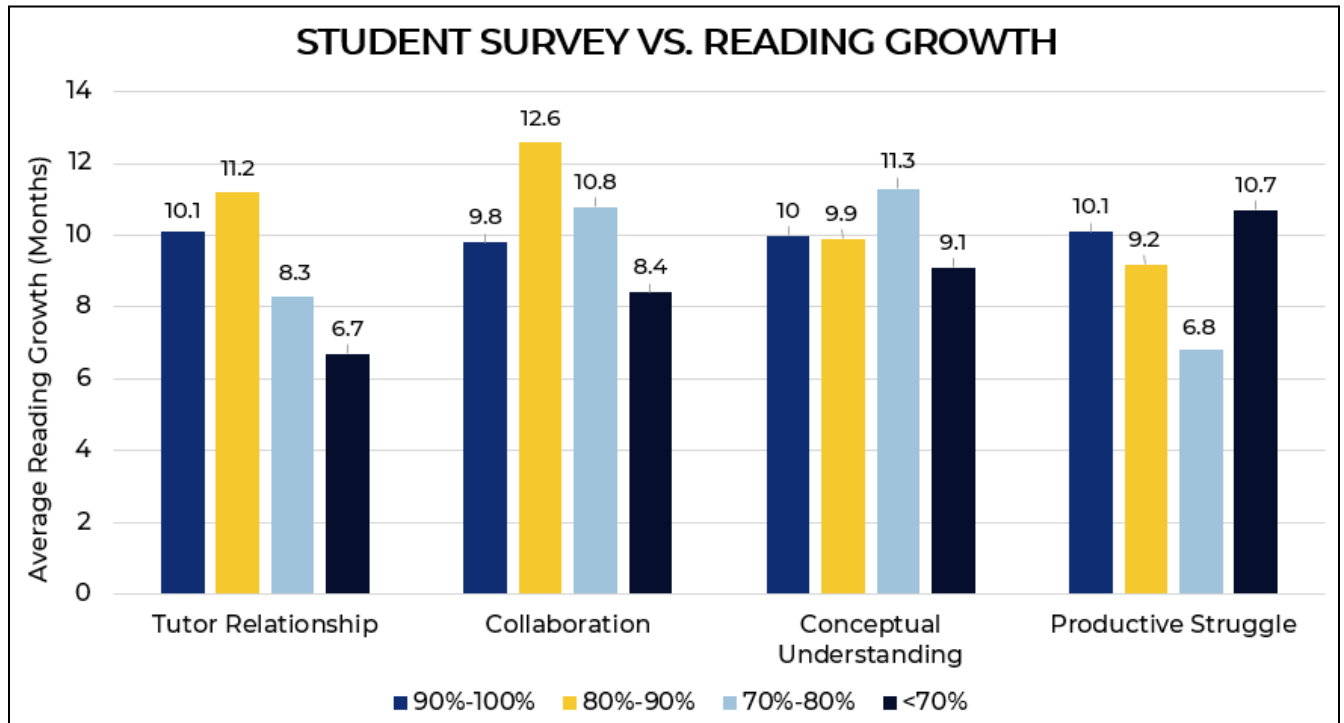**Factors Influencing Variability**

1. **Foundational Skills Variability:** Early learners in K-3 often experience **growth spurts** at different stages of phonics instruction.

   ○ Some students show significant gains during early skill acquisition (e.g., decoding and blending).

   ○ Others may plateau temporarily while consolidating foundational skills.

2. **Developmental Readiness:** Young students develop literacy skills at different paces based on their **cognitive and developmental readiness.** This variability can influence growth patterns and result in inconsistent correlations with survey categories.

3. **Instructional Focus:** The emphasis on **phonics-based instruction** may prioritize specific skills that drive reading growth but do not directly align with survey categories like **Collaboration** or **Conceptual Understanding**.

4. **Small Sample Sizes:** Some percentage groups may include **smaller sample sizes**, making averages more sensitive to outliers or individual differences.

Implications for Foundational Literacy Development

These findings underscore the **complexity of early literacy development:**

- Survey results should be interpreted alongside instructional strategies to account for the dynamic nature of skill acquisition in early learners.

- Developmental and instructional factors must be considered when evaluating progress, particularly for students in the **K-3 phonics-based program.**

This analysis highlights the importance of pairing survey data with a nuanced understanding of early literacy to better support students' growth trajectories.

STUDENT SURVEY VS. READING GROWTH

Average Reading Growth (Months)

Category	90%-100%	80%-90%	70%-80%	<70%
Tutor Relationship	10.1	11.2	8.3	6.7
Collaboration	9.8	12.6	10.8	8.4
Conceptual Understanding	10	9.9	11.3	9.1
Productive Struggle	10.1	9.2	6.8	10.7

3.2.5 — Reading Literature (RL) and Reading Informational Text (RI) Standards Progress Score

Mastery Checks Overview

Each lesson includes multiple "**mastery checks**" to evaluate students' progress toward mastering specific standards. Tutors assess mastery through **direct observation** of student work, considering both the **correctness of the answer** and the **process used to achieve it**.

Tutors assign one of five outcomes for each standard:

1. **Proficient (100%)**
2. **Approaching Proficient (66.7%)**
3. **Partially Proficient (33.3%)**
4. **Emerging (0%)**
5. **Not Assessed:** For sessions where students were not asked to demonstrate mastery of the standard.

Assessment Process

1. **Baseline Assessment:** The initial mastery check establishes the student's starting point for a given standard.

2. **Instructional Guidance:** Tutors use baseline results to tailor instruction to the student's needs.

3. **Progress Monitoring:** Subsequent mastery checks track the student's growth, allowing them to demonstrate new understanding over time.

Cignition's goal is for students to progress from their baseline to "**Proficient**" during the sessions focused on a standard. Since the goal is **student mastery**, standards are typically revisited across multiple sessions to ensure deep understanding.
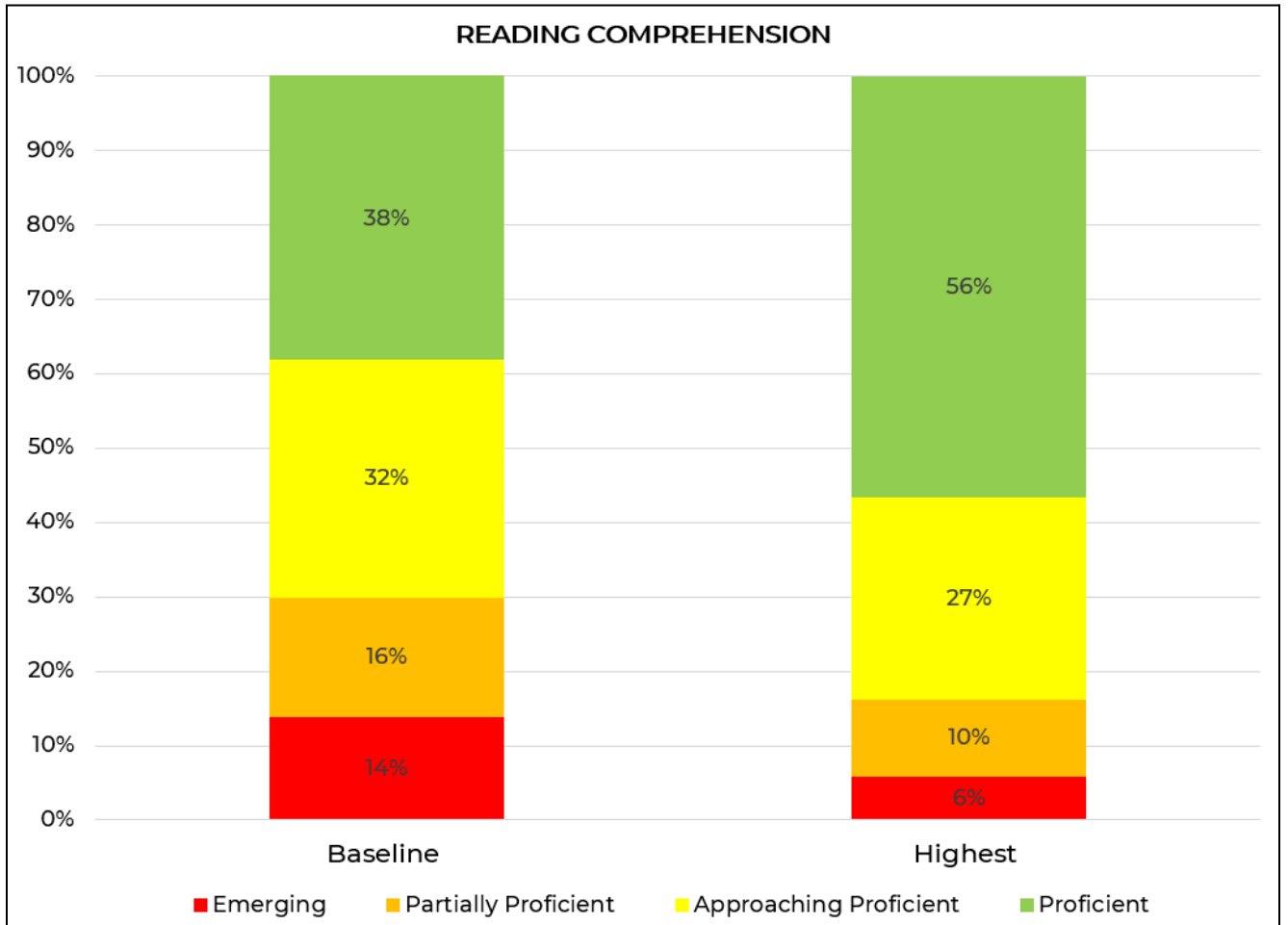
Growth in Ohio K-3 Students

A graphic accompanying this section illustrates the growth of Ohio K-3 students across all mastery checks for **Reading Literature** and **Reading Informational Text standards.**

Reasons for Variability

Several factors contribute to variability in standards progress scores:

1. Poor decoding skills often impair reading comprehension, as students who struggle to decode cannot read fluently.

2. Students may appear proficient in comprehension when their baseline assessments are based on **listening** to the tutor or peers read rather than **independent reading**.

These findings emphasize the importance of addressing foundational decoding skills to support progress in higher-order reading standards.

READING COMPREHENSION

	Baseline	Highest
Proficient	38%	56%
Approaching Proficient	32%	27%
Partially Proficient	16%	10%
Emerging	14%	6%

Legend: ■ Emerging ■ Partially Proficient ■ Approaching Proficient ■ Proficient

4.0 — Findings Summary

This year marked Cignition's first statewide initiative in Ohio, providing an opportunity to implement our program across multiple districts with varying school environments, schedules, and staff structures. While variability is inherent in most implementations, the Ohio program introduced an unprecedented level of variation due to factors such as:

- **Diverse School Contexts**: Districts included traditional schools, charter schools, and specialized environments like credit recovery programs and faith-based institutions.

- **Program Start Times:** Some systems joined late after working with a different vendor.

- **Expanded Management Team:** Multiple program managers were deployed to support the high number of participating schools and districts.

This variation prompted a key question: **Does greater variability impact program outcomes?**

Key Findings

1. **Engagement and Attendance Exceeded Expectations:** Despite the challenges, students in the Ohio program demonstrated engagement and attendance rates well above our minimum expectations. As noted, nearly **95% of students met the attendance standard,** and the average participation score across all sessions was **89.5%**, reflecting strong overall engagement.

2. **Student Confidence and Learning Environment:** Students consistently reported high levels of confidence in their tutors, group members, and their ability to persist through challenges. These indicators suggest that the program fostered a supportive and productive learning environment, even amidst external distractions and variability.

3. **Academic Growth and Efficacy:** Although most students did not achieve the full **50 contact hours** goal due to program start delays and other logistical constraints, the results demonstrated that **time spent in the program was highly effective.**

- Students receiving **40-50 hours** of tutoring achieved an **average of 17.8 months of reading growth,** showcasing the program's ability to drive significant progress.

- The relationship between higher attendance rates and greater reading growth reaffirmed the importance of consistent engagement.

4. **Flexibility and Scalability:** The program's adaptability across a wide range of environments was a key success factor. Despite the variability in school settings, staffing, and schedules, the foundational elements of the Cignition program remained effective. This flexibility underscores the program's scalability and potential for broader statewide or national initiatives.

Conclusion

The Ohio implementation presented unique challenges and opportunities for Cignition to demonstrate its effectiveness. The data clearly indicate that the program overcame environmental challenges and maintained its core mission: delivering impactful learning experiences that drive measurable growth. Moving forward, these findings will inform refinements further to optimize the program for diverse and variable educational contexts.

Appendix A — Districts and schools participating in Cignition's foundational literacy tutoring program under the Future Forward Ohio Grant

District Name	School Served
Amherst Exempted Village Schools	Powers Elementary
Batavia Local Schools	Batavia Elementary
Bridges Preparatory Academy	Bridges Preparatory School
Delaware City Schools	Schultz Elementary
Field Local School District	Brimfield Elementary
	Suffield Elementary
Fort Frye Local School District	Beverly Center Elementary
	Lowell Elementary
	Salem Liberty Elementary
Lima City Schools	Lima South Science and Technology Magnet
Mohawk Local Schools	Mohawk Elementary
St. Paul School	St. Paul Elementary
Zane Trace Local Schools	Zane Trace Elementary

Appendix B — System-level student engagement and academic progress data

B.1 — Measures of Engagement

District Name	Scale		Attendance Percentage	Participation				Student Feedback			
	Students Enrolled	Sessions Offered		Persevered with Tasks	Listened Actively to Peers and Tutor	Participated in Discussions	Overall Participation	Tutor Relationship	Collaboration	Efficacy	Productive Struggle
Amherst	43	1161	88.8%	92.9%	91.4%	89.0%	91.1%	95.9%	94.0%	93.6%	94.2%
Batavia	<25	980	92.3%	94.0%	93.3%	89.8%	92.4%	99.6%	98.3%	96.8%	96.9%
Bridges Prep	47	1174	81.9%	77.3%	76.1%	75.7%	76.4%	93.2%	92.0%	90.2%	83.3%
Delaware City Schools	69	1531	85.3%	90.3%	90.1%	89.1%	89.8%	91.8%	91.1%	88.9%	90.5%
Field Local	45	180	86.4%	90.6%	90.4%	90.0%	90.3%	95.9%	95.9%	96.3%	96.7%
Fort Frye	48	486	94.4%	94.7%	93.5%	93.6%	93.9%	92.9%	90.4%	88.6%	90.6%
Lima City	42	1601	88.6%	81.2%	80.1%	79.0%	80.1%	91.4%	88.6%	83.1%	87.6%
Mohawk	<25	154	90.0%	98.7%	98.7%	98.7%	98.7%	100.0%	99.5%	91.3%	99.8%
St. Paul	<25	859	92.0%	96.5%	94.9%	96.4%	95.9%	97.9%	94.0%	91.8%	96.2%
Zane Trace	<25	238	95.6%	76.1%	75.8%	73.1%	86.4%	100.0%	100.0%	90.2%	NA
Statewide	**343**	**8364**	**89.5%**	**89.2%**	**88.4%**	**87.4%**	**89.5%**	**95.9%**	**94.4%**	**91.1%**	**92.9%**

B.2 — Measures of Progress

District Name	Average Contact Hours	Average Sessions Attended	Average Standards Covered	Academic Growth on RL and RI Standards	Months of Reading Growth	Months of Reading Growth per Contact Hour
Amherst	29.5	50.0	10.6	19.6%	14.5	0.56
Batavia	37.5	59.1	14.9	30.5%	17.9	0.49
Bridges Prep	19.0	30.9	10.4	21.6%	8.2	0.64
Delaware City Schools	17.2	38.4	14.8	25.8%	6.6	0.42
Field Local	14.4	29.7	5.6	13.0%	4.7	0.32
Fort Frye	5.2	13.5	10.6	22.3%	2.2	0.41
Lima City	34.9	86.4	21.3	26.4%	12.8	0.38
Mohawk	28.8	57.6	17.8	31.7%	10.0	0.3
St. Paul	36.0	124.3	68.0	21.7%	13.8	0.4
Zane Trace	28.7	98.4	25.3	39.0%	4.0	0.13
Statewide	**25.1**	**58.8**	**19.9**	**25.1%**	**9.5**	**0.41**