Beyond the Achievement Gap

What My Middle School Students Taught Me About Learning in the Age of AI

A Practitioner Inquiry Report

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Practitioner Report Disclaimer

This publication presents the findings of a practitioner inquiry conducted during the 2025–2026 school year in one sixth-grade Social Studies classroom.

The report draws upon classroom observations, reflective practice, instructional experiences, and a spring 2026 student survey. The survey generated 114 submissions. Because a small number of students accidentally completed the survey more than once, duplicate submissions were removed for analysis, resulting in **95 unique student respondents**.

This is not a peer-reviewed research study and does not claim causal relationships between artificial intelligence and student learning outcomes.

The **Pre-Achievement Framework** is introduced as a practitioner-developed conceptual framework intended to support educator observation, professional dialogue, and future research. It is offered as an observational lens rather than a diagnostic instrument or validated assessment model.

Student identities have been protected throughout this report. Classroom portraits are composite representations synthesized from multiple observations and are intended to illustrate recurring learning patterns rather than describe individual students.

The views expressed in this publication are solely those of the author and do not necessarily reflect the views of his employer or any affiliated organization.

Why This Report Exists

This report began with a simple question.

How were my sixth-grade students using artificial intelligence?

Over the course of the 2025-2026 school year, that question gradually changed.

Instead of asking only how AI was influencing learning, I found myself asking something much more fundamental:

What happens before achievement that educators may not be noticing?

The observations presented throughout this report emerged from one classroom, student survey responses, and the daily practice of teaching.

They are offered not as definitive answers, but as an invitation to observe learning more intentionally.

If these pages encourage educators to notice students more carefully, celebrate growth more thoughtfully, and continue asking better questions, then the students who inspired this work will have made a contribution far beyond a single classroom.

Dedication

To my students—

Thank you for trusting me with your stories, your questions, your frustrations, your laughter, and your growth.

You may never fully realize how much you taught your teacher.

This report exists because I chose to pay attention, but it was your courage to begin, to struggle, to ask questions, to persist, and to help one another that gave these observations meaning.

You reminded me that learning is often visible long before achievement appears on a report card.

To my wife, Tiffany—

Thank you for reminding our family to **become your greatest resource**.

What began as words of encouragement to our son became one of the guiding principles of my classroom and, ultimately, one of the central ideas in this report.

To my son, Myles—

Thank you for teaching me another lesson that found its way into these pages:

Always question. Always wonder.

May you never lose your curiosity.

Finally, this report is dedicated to every educator who still believes that before students can achieve, they must first be seen.

May we continue learning to notice what matters most.

Executive Summary

For decades, educators, policymakers, and researchers have worked to narrow academic achievement gaps. These efforts have rightly focused on improving student outcomes through curriculum, instructional practice, assessment, accountability, and access to educational resources.

Artificial intelligence has recently entered this conversation, prompting new questions about academic integrity, student learning, teacher workload, and the future of classroom instruction. Much of the public discussion has centered on whether AI improves achievement or undermines it.

This report begins with a different question.

Drawing upon classroom observations during the **2025–2026 school year**, a spring 2026 survey of **95 unique sixth-grade students**, reflective practice, and ongoing professional dialogue, I began wondering whether educators may be overlooking an important part of the learning process.

The most interesting changes I observed did not always appear first in grades or assessment results. They appeared in behaviors.

Students began assignments.

They asked questions.

They persisted through difficulty.

They revised their work.

They demonstrated greater ownership.

They helped classmates.

These observations were not universal, and this report does not establish that artificial intelligence caused them. Rather, they raised a professional question:

What happens before achievement that educators may not be noticing?

That question became the foundation of the **Pre-Achievement Framework**.

The Pre-Achievement Framework is a practitioner-developed conceptual framework that encourages educators to recognize observable learner behaviors that may emerge before measurable academic achievement becomes visible. It does not replace traditional measures of

achievement. Instead, it complements them by drawing attention to the learning process that precedes academic outcomes.

The framework currently identifies six recurring **Pre-Achievement Behaviors**:

- Beginning
- Asking Questions
- Persisting
- Revising
- Taking Ownership
- Helping Others

Artificial intelligence is not the framework.

In my classroom, AI was one educational support within a broader learning environment shaped by relationships, instruction, student individuality, cultural identity, student voice, and resourcefulness. At times, AI appeared to reduce the friction of beginning, support clarification, or make revision easier for some students. Other students used AI rarely or not at all.

Those differences became important.

They suggested that the more useful question may not simply be whether AI improves achievement, but how students engage with the resources available to them—and what educators can learn by observing that engagement more carefully.

This report draws upon four interconnected sources of practitioner evidence:

- Classroom observations during the 2025–2026 school year in one sixth-grade Social Studies classroom.
- A student AI-use survey administered from **April 1 through May 22, 2026**, resulting in **95 unique respondents after accidental duplicate submissions were removed**.
- Reflective examination of classroom instruction, student work, interactions, and learning behaviors.
- Professional dialogue with educators, researchers, school leaders, parents, and technology professionals that challenged and refined my interpretations.

This report does not argue that AI automatically improves learning, eliminates educational inequities, or substitutes for effective teaching. Nor does it claim that the Pre-Achievement Behaviors predict future academic success.

Instead, it offers one practitioner’s observations and a framework worthy of further questioning, refinement, and research.

Achievement tells us where students arrived. The Pre-Achievement Framework helps us notice how students may be beginning to get there.

Sometimes educational progress begins not by finding a better answer, but by asking a better question.

How to Read This Report

This report is neither a defense of artificial intelligence nor an argument against it. It is an invitation to examine one classroom teacher's observations through the lens of practitioner inquiry.

Some readers may agree with the Pre-Achievement Framework. Others may challenge it. Both responses are valuable.

The purpose of this report is not to end the conversation, but to contribute to it—and to encourage educators and researchers to continue asking what learning looks like before achievement becomes measurable.

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Why I Started Paying Attention

It Started With a Feeling

I remember looking around my classroom one afternoon during independent work time.

The room wasn't quiet—middle school classrooms rarely are—but it felt different.

A student who had spent much of the year avoiding assignments was typing with purpose. Another walked over to my desk, eager to tell me he had finished his work. Across the room, students who had once been more likely to tease one another about mistakes were leaning over Chromebooks, notebooks, maps, and project materials, helping each other figure out the next step.

Not every student was engaged.

Not every assignment was completed.

Not every day looked like this.

But something had changed.

At first, I couldn't explain it.

As a first-year sixth-grade Social Studies teacher in a turnaround middle school, my focus was on planning lessons, building relationships, managing behavior, and helping approximately 140 students experience success. I wasn't trying to conduct a formal research study. I was simply trying to become a better teacher.

But I was also paying attention.

The more closely I watched, the more I noticed patterns I could not ignore.

Curiosity Before Conclusions

Like many educators, I was aware of the growing conversation surrounding artificial intelligence.

Much of that conversation focused on cheating, academic integrity, and whether AI was replacing student thinking. Those questions deserved serious attention, but they were not the questions occupying my classroom each day.

Instead, I found myself asking something simpler:

Why were some students who had rarely completed work beginning to engage?

The changes were not universal or consistent.

But they occurred often enough to make me curious.

Some students who had previously stared at blank pages were beginning assignments.

Some who rarely sought feedback were asking questions.

Others were demonstrating greater ownership of their work.

The most interesting changes were not appearing first in grades.

They were appearing in behaviors.

That realization became the beginning of this inquiry.

Listening Before Explaining

Curiosity led me to ask my students directly about their experiences.

During spring 2026, I administered a classroom survey exploring students' experiences with artificial intelligence and schoolwork. The survey produced 114 submissions; after accidental duplicate submissions were removed, the analysis reflected **95 unique student respondents**.

At the same time, I continued documenting classroom observations, reflecting on my teaching, sharing emerging ideas through a 13-part LinkedIn series, and engaging in conversations with educators, researchers, school leaders, parents, and technology professionals.

Those conversations rarely provided simple answers.

Instead, they challenged my assumptions.

They refined my observations.

Sometimes they changed my thinking entirely.

This report grew from that ongoing process of practitioner inquiry, a tradition that treats systematic reflection on practice as a source of professional knowledge and questions for further study (Cochran-Smith & Lytle, 2009; Dana & Yendol-Hoppey, 2020).

What This Report Is—and Isn't

This report is not an experimental research study.

It does not claim that artificial intelligence causes improved academic achievement.

It does not argue that every student should use AI.

And it does not suggest that observations from one sixth-grade Social Studies classroom automatically apply to every educational setting.

Instead, this report documents one teacher's observations from a single classroom and introduces the **Pre-Achievement Framework**, a practitioner-developed conceptual framework that emerged from noticing learner behaviors that sometimes appeared before measurable academic improvement became visible.

Throughout these pages, I distinguish carefully between what I observed, what I believe those observations may suggest, and what established educational research can support.

That distinction is intentional.

It reflects a commitment to intellectual honesty and to the belief that meaningful educational progress occurs when practitioners and researchers remain in conversation with one another.

An Invitation

This report is offered as an invitation rather than a conclusion.

My hope is not that readers agree with every interpretation.

My hope is that they begin observing their own students differently.

If these pages encourage educators to notice the behaviors that can emerge before achievement—to ask better questions, remain curious, and recognize growth while it is still developing—then this work will have accomplished its purpose.

When I began paying closer attention to artificial intelligence in my classroom, I expected to learn more about the technology.

Instead, I began learning how much more there was to notice about my students.

Everything that follows begins there.

Chapter 2

The Classroom Before AI

> *Technology never enters a neutral classroom. It enters a classroom that already has a culture.*

Before discussing artificial intelligence, it is important to understand the classroom in which these observations occurred.

This report is not simply the story of what happened when AI became available to students.

It is the story of what happened when AI became one educational support **within this classroom**.

That distinction matters.

Every classroom has its own culture, routines, expectations, relationships, instructional practices, and history. Those conditions shape how students respond to any educational support—including artificial intelligence.

The observations described throughout this report cannot be separated from the environment in which they emerged.

A Classroom of Possibility

During the 2025–2026 school year, I taught approximately 140 sixth-grade students in a turnaround middle school in Gary, Indiana.

Students entered my classroom with a wide range of academic strengths, needs, experiences, and levels of confidence. Many were working below grade-level expectations in reading or mathematics. Some had experienced interruptions in their education, while others carried challenges beyond the classroom that inevitably shaped their experience at school.

But I made a conscious decision early in the year:

I would not define students by what they lacked.

Instead, I chose to teach from a simple belief:

Potential is easier to recognize than predict.

I could assess where students were academically.

I could observe their habits.

I could identify areas where they needed support.

But I never wanted those observations to become a ceiling on what I believed they could become.

The Three Commitments That Shaped My Classroom

Long before artificial intelligence became part of my classroom conversations, my teaching was grounded in three commitments influenced in part by Baruti Kafele's equity framework (Kafele, 2021):

Student Individuality. Cultural Identity. Student Voice.

These commitments shaped how I thought about relationships, instruction, behavior, expectations, and student participation throughout the year.

1. Student Individuality

Every student deserved to be seen.

Not simply as another name on a roster.

Not simply as a test score.

But as an individual with unique strengths, challenges, interests, habits, and experiences.

Students did not respond to the same assignment in the same way. They did not need encouragement in the same way. They did not demonstrate understanding in the same way.

That became increasingly important as the year progressed.

Whenever possible, I tried to understand the learner before interpreting the behavior.

2. Cultural Identity

The overwhelming majority of students in my classroom identified as Black.

I did not view their cultural identities as separate from the learning environment. Culture shaped how students experienced school, how they related to one another, how they interpreted the curriculum, and how they experienced me as their teacher.

Acknowledging cultural identity was never about lowering expectations.

It was about creating a classroom in which students could feel respected, understood, and fully capable of academic success.

Students should not have to choose between being themselves and being successful at school.

3. Student Voice

Every student had something worth contributing.

Some voices filled the room.

Others were quiet.

Some students communicated through thoughtful discussion.

Others communicated through humor, hesitation, frustration, or behavior that initially appeared unrelated to learning.

Over time, I became increasingly interested in what students were communicating beneath the surface.

Creating appropriate opportunities for students to ask questions, express uncertainty, offer ideas, disagree respectfully, and contribute to the classroom community became an important part of my teaching.

Student voice did not mean students controlled the classroom.

It meant their experiences mattered within it.

Teaching for Resourcefulness

One message appeared repeatedly throughout the school year:

Become your greatest resource.

I first heard those words from my wife, Tiffany, as she encouraged our son to become a more independent learner.

Eventually, the phrase became part of my classroom vocabulary.

When students encountered difficulty, I wanted them to think beyond a single question:

Do I know the answer?

I encouraged them to ask something different:

What resource can help me move forward?

Sometimes the right resource was the textbook.

Sometimes it was a classroom map.

Sometimes it was their notes.

Sometimes it was a classmate.

Sometimes it was me.

Later in the year, sometimes it was artificial intelligence.

The lesson was never:

Use AI.

The lesson was:

Learn how to choose the right resource for the right moment.

The goal was not dependence on any single tool.

The goal was increasing resourcefulness.

The Rhythm of Learning

Instruction in my classroom frequently followed the gradual release of responsibility model, moving from teacher modeling to guided practice and then toward greater student independence (Pearson & Gallagher, 1983).

I Do

Modeling and direct instruction.

We Do

Guided practice, questioning, discussion, and collaborative learning.

You Do

Independent application.

One observation became particularly important.

Many of the changes that eventually shaped this report became most visible during the **You Do** phase.

Not while I was explaining the lesson.

Not while the entire class was responding together.

But when students were independently trying to decide what to do next.

That was where hesitation became visible.

So did persistence.

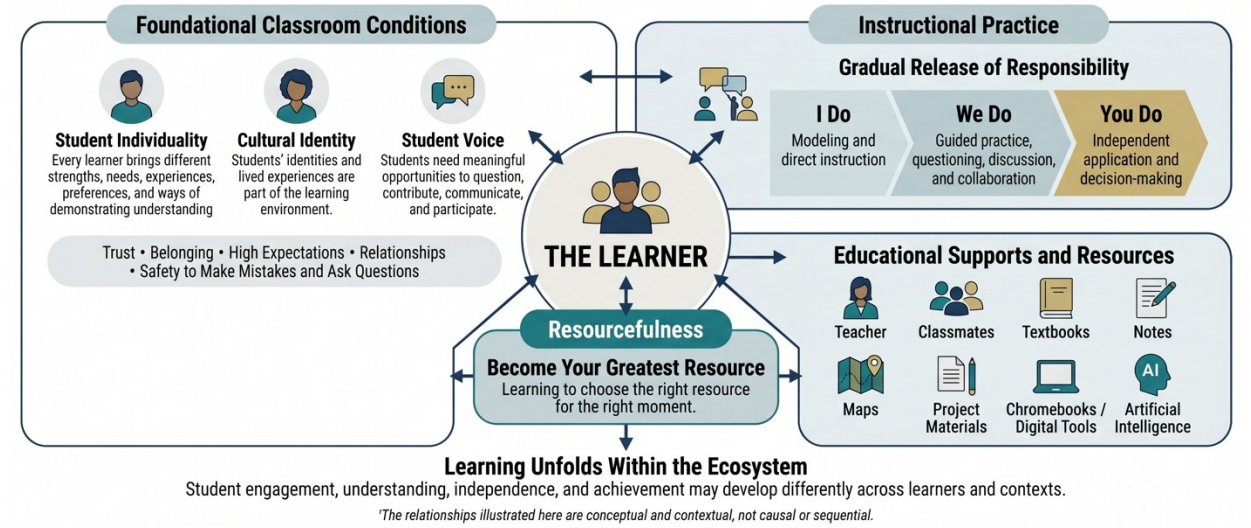
So did questioning.

So did resourcefulness.

And eventually, so did students' decisions about whether—and how—to use artificial intelligence.

Figure 1. The Learning Ecosystem

The classroom conditions, instructional practices, and educational supports surrounding student learning during this practitioner inquiry



Core Insight | Artificial intelligence did not enter an empty classroom. It became one educational support within an existing ecosystem of relationships, pedagogy, culture, resources, and learner choice.

Why This Context Matters

The observations described in the chapters that follow occurred within this classroom culture.

They occurred within relationships.

Within routines.

Within project-based learning.

Within expectations.

Within opportunities for student voice.

Within an emphasis on curiosity and resourcefulness.

Artificial intelligence did not create those conditions.

It entered a learning environment in which those conditions were already being cultivated.

That distinction is essential to understanding everything that follows.

This report is therefore not simply about what technology did in a classroom.

It is about what became visible when a new educational support encountered students, relationships, pedagogy, and a classroom culture already in motion.

Chapter 3

Beyond AI Literacy: The Missing Human Dimension

> *Artificial intelligence may change how students access information, but it does not change the fundamentally human conditions that make learning possible.*

Artificial intelligence has quickly become one of the most discussed topics in education.

Schools are developing policies.

Teachers are learning how to use new tools.

Students are experimenting with generative AI.

Researchers are examining both the opportunities and risks of artificial intelligence in learning.

These conversations have helped establish an important goal: helping students become AI literate—capable of understanding and using artificial intelligence responsibly, critically, ethically, and effectively (Long & Magerko, 2020; Ng et al., 2021).

That work matters.

But as I reflected on my own classroom, I began wondering whether AI literacy addressed only part of the question.

Not simply:

Can students use AI?

But:

What allows students to benefit from any educational support in the first place?

That question became a turning point in my thinking.

The Classroom Changed My Question

At first, I believed I was observing how students were using artificial intelligence.

The more closely I watched, however, the more my attention shifted away from the technology itself.

I began noticing students.

Some students who had previously hesitated to begin assignments started working.

Some who rarely sought clarification began asking questions.

Others persisted a little longer when work became difficult.

Some revised after receiving feedback.

Others began helping classmates.

None of those behaviors guaranteed academic success.

Nor could I conclude that artificial intelligence caused them.

But in my classroom, they seemed significant because they often became visible **before** any corresponding change appeared in grades or other traditional measures of achievement.

The technology had drawn my attention to something more fundamental.

I was beginning to notice learning through behavior.

Learning Is Human Before It Is Technological

Technology alone cannot create the conditions that make learning possible.

Students enter classrooms with histories, relationships, expectations, identities, prior experiences, and beliefs about themselves as learners.

They need opportunities to feel seen.

To belong.

To trust.

To make mistakes without treating those mistakes as proof that they cannot learn.

To ask questions without embarrassment.

To experience both support and high expectations.

Research on learning and development similarly emphasizes the importance of relationships, belonging, identity, supportive environments, and meaningful engagement in shaping learning (Darling-Hammond et al., 2020; National Academies of Sciences, Engineering, and Medicine, 2018).

These conditions existed before artificial intelligence entered my classroom.

They also help explain why students did not respond to AI in the same way.

Some embraced it.

Some used it occasionally.

Some preferred other resources.

Others needed encouragement from a teacher or classmate before any tool became useful.

That variation reinforced an idea introduced in the previous chapter:

Technology operates within a classroom culture. It does not stand apart from it.

Resourcefulness and Judgment

Chapter 2 introduced one of the guiding ideas of my classroom:

Become your greatest resource.

The purpose was never to make students dependent on artificial intelligence—or on any single resource.

It was to help them become more intentional about what to do when they did not immediately know how to move forward.

A textbook might be the right resource.

A map.

Notes.

A classmate.

A teacher.

Or, at times, artificial intelligence.

But choosing a resource was only part of the responsibility.

Students also had to learn to question what that resource provided.

Another phrase that shaped my thinking was:

Always question. Always wonder.

For a Social Studies classroom, that habit mattered long before generative AI.

Students were already expected to examine evidence, evaluate primary and secondary sources, question credibility, compare accounts, and verify information.

AI made those habits more—not less—important.

An AI-generated response could be useful without being automatically trustworthy.

The goal was not simply access to information.

The goal was increasingly thoughtful judgment about information.

From AI Literacy to the Conditions That Make Learning Possible

As my observations accumulated, I began to see a distinction.

AI literacy concerns whether students understand how to interact with artificial intelligence responsibly and effectively.

My classroom observations were leading me toward a different question:

What happens within the learner before any educational support becomes useful?

I kept noticing students who were willing to begin.

Students who asked questions.

Students who persisted.

Students who revised.

Students who began taking greater responsibility for their learning.

Students who helped others move forward.

At this stage of the inquiry, I was not yet calling these **Pre-Achievement Behaviors**.

I was simply noticing them.

And I began to wonder whether these seemingly ordinary classroom behaviors deserved more attention than educators typically give them.

They did not replace achievement.

They did not guarantee achievement.

But in this classroom, they often appeared while learning was still taking shape.

That realization shifted my attention away from artificial intelligence itself and toward the human behaviors surrounding learning.

A Different Way of Seeing Learning

By this point, the original question—

Can AI improve learning?

—no longer seemed sufficient.

A better question was emerging:

What conditions allow students to benefit from educational supports—including AI—and what can teachers learn by observing what students do next?

I did not yet have a framework.

I had observations.

Questions.

Patterns that seemed to repeat.

The next step was to listen more carefully to the students themselves.

Because before I could explain what I thought I was seeing, I needed to understand how they described their own experiences.

Chapter 4

Listening to Students

> *Before interpreting students' experiences with artificial intelligence, I believed it was important to hear directly from the students themselves.*

Throughout the 2025–2026 school year, conversations about artificial intelligence in education often centered on adult perspectives.

Teachers debated classroom policies.

Researchers examined opportunities and risks.

Technology companies introduced new tools at a remarkable pace.

But if I wanted to understand what was happening in my own classroom, I also needed to hear from the students using—or choosing not to use—those tools.

During spring 2026, I administered a short classroom survey asking students three questions:

1. Whether they had used artificial intelligence to help with schoolwork.
2. What they had used AI for.
3. Whether AI made starting or understanding their work easier.

The survey was administered between **April 1 and May 22, 2026**.

It generated **114 submissions**. Because some students accidentally completed the survey more than once, repeat submissions were removed during data cleaning. After duplicate responses and one obvious spelling variation were reconciled, the analysis represented **95 unique student respondents**.

The survey was not designed to produce nationally representative findings.

It was designed to answer a much smaller question:

What were my students reporting about their own experiences with AI?

How Often Students Reported Using AI

Student responses immediately showed that AI use was not universal.

Of the **95 unique respondents**:

- **47 students (49.5%)** reported using AI **occasionally** for schoolwork.
- **22 students (23.2%)** reported using AI **regularly**.
- **26 students (27.4%)** reported **never** using AI for schoolwork.

Taken together, **69 students—72.6% of respondents—reported using AI at least occasionally.**

That finding mattered because it reinforced something I had already been seeing in the classroom:

Students with access to the same technology were making different choices about whether to use it.

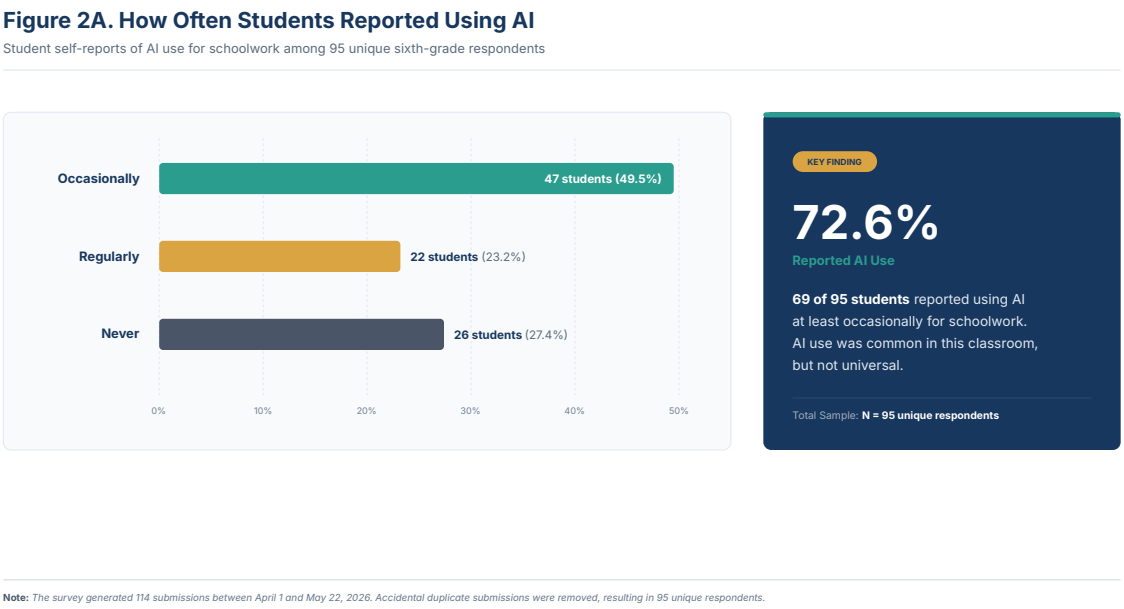


Figure 2A. How Often Students Reported Using AI

What Students Reported Using AI For

Students who identified themselves as AI users could select more than one reason for using it.

Among those **69 self-reported AI users**, the most commonly selected uses were:

- **Research or understanding topics:** 35 students (50.7%)
- **Getting started on assignments:** 28 students (40.6%)
- **Math help:** 27 students (39.1%)
- **Studying or test preparation:** 23 students (33.3%)
- **Writing—essays, responses, or summaries:** 22 students (31.9%)
- **Brainstorming ideas:** 20 students (29.0%)

Because students could select multiple responses, these percentages do not add to 100 percent.

The pattern is important.

Students did not report using AI for only one type of task. They described using it across several parts of the learning process—from understanding information to beginning assignments, writing, studying, and generating ideas.

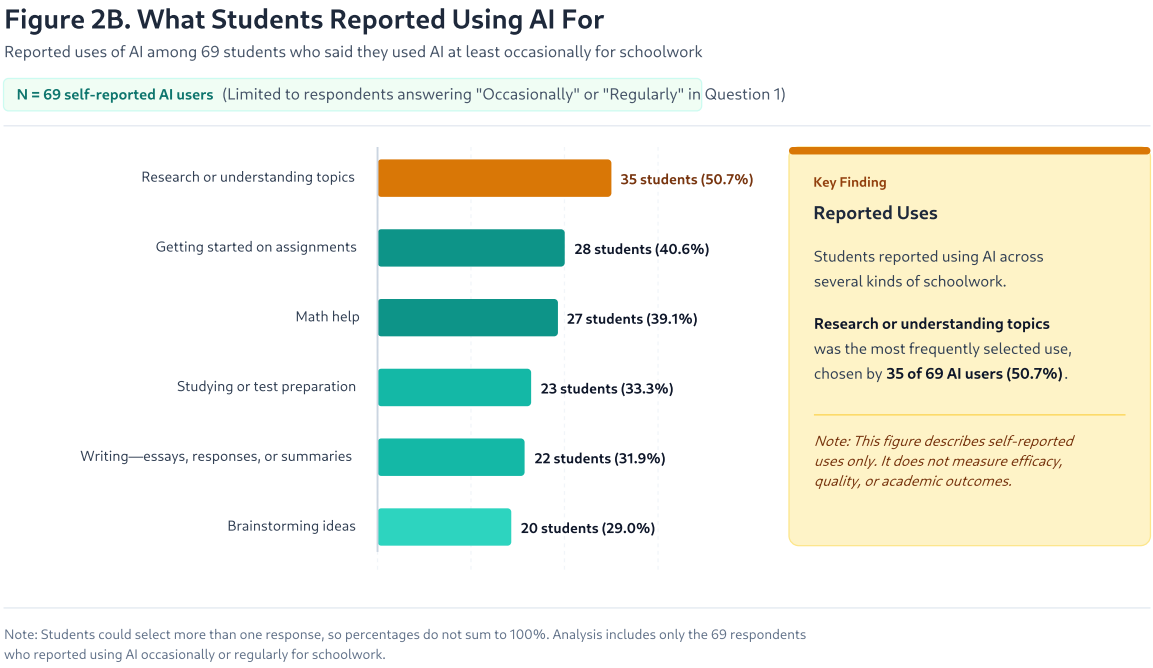


Figure 2B. What Students Reported Using AI For

Did AI Make the Work Easier to Begin or Understand?

The third survey question asked students who had used AI whether it made **starting or understanding their work easier**.

Among the 69 students who reported using AI:

- **37 students (53.6%)** said **“Yes, a little.”**
- **25 students (36.2%)** said **“Yes, a lot.”**
- **4 students (5.8%)** said **“Not really.”**
- **3 students (4.3%)** said **“Not at all.”**

Together, **62 of 69 AI users—89.9%—reported that AI made starting or understanding their work easier at least to some degree.**

That number deserves careful interpretation.

The survey question combined **starting** and **understanding** into a single item, so the responses cannot tell us which of those two experiences students had in mind. Nor does a student saying that work felt easier establish that more learning occurred.

What it does establish is much narrower:

Most students in this classroom who reported using AI also reported experiencing some degree of reduced difficulty in starting or understanding their schoolwork.

That distinction matters.

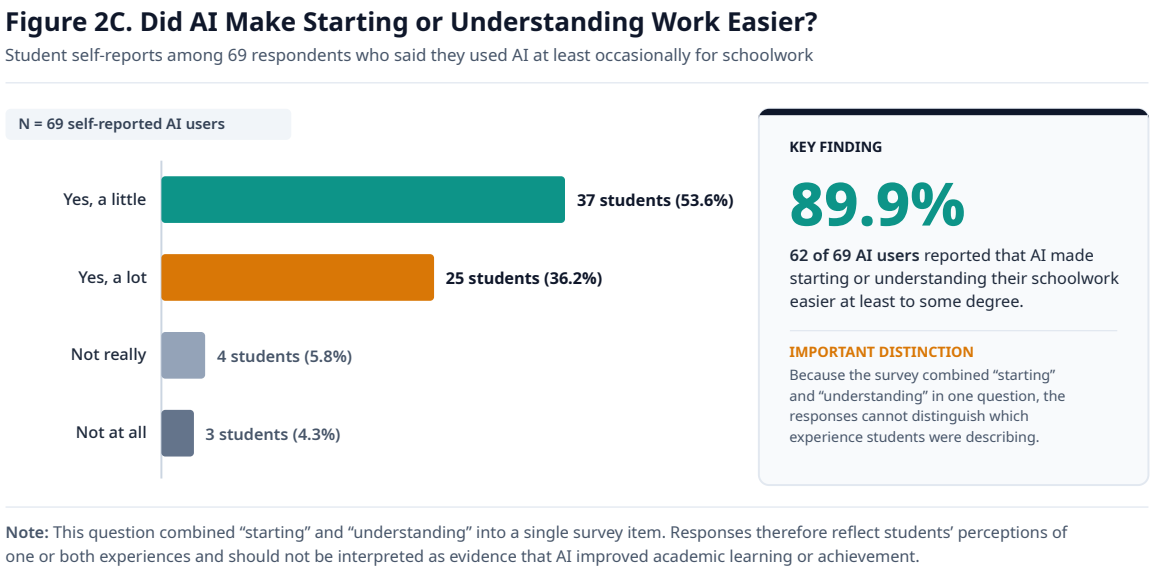


Figure 2C. Did AI Make Starting or Understanding Work Easier?

More Than One Story

The survey did not tell a single story about students and artificial intelligence.

Nearly three-quarters of respondents reported using AI at least occasionally.

More than one-quarter reported never using it for schoolwork.

Among those who used AI, the purposes varied considerably.

That variation mirrored what I observed in the classroom throughout the year.

Some students readily incorporated digital tools into their work.

Others used them selectively.

Some students continued to prefer pencils, notebooks, maps, textbooks, classmates, or their teacher.

The survey therefore reinforced—not proved—an observation that would continue shaping my thinking:

In this classroom, equal access did not produce equal use.

Students encountered the same educational support but made different choices about whether, when, and how to use it.

Listening Before Explaining

There is an important temptation at this point.

It would be easy to look at these numbers and immediately explain *why* students responded the way they did.

I want to resist that temptation.

This survey tells us what students reported.

It does not tell us that AI caused stronger engagement.

It does not establish that students learned more.

It does not show that students who used AI performed better than students who did not.

And because the survey relied primarily on closed-choice questions, it does not provide the kind of rich qualitative student testimony that an interview or open-ended survey might have produced.

Instead, it provides a descriptive snapshot of how students reported using AI during one period of one school year.

That snapshot becomes more meaningful when considered alongside the classroom observations presented throughout this report.

The following chapter brings those two forms of practitioner evidence together—not to classify students permanently, but to illustrate several recurring patterns I began noticing across different learners.

Those patterns became the **Composite Classroom Portraits**.

A Note on Survey Analysis

The survey was intended to be completed once by each student. Some students submitted the form more than once after forgetting they had previously completed it. For analysis, repeat submissions were removed and the earliest response was retained.

A small number of submissions also contained conflicting answers—for example, a student selecting that they had never used AI while also answering a follow-up question about AI use. To avoid forcing those responses into an interpretation they did not clearly support, analyses of **what AI was used for** and **whether it made work easier** were limited to the **69 respondents who identified themselves as AI users in the first survey question**.

The findings should therefore be understood as **descriptive self-report data from this classroom**, not as causal evidence or generalizable research findings.

Chapter 5

Composite Classroom Portraits

Statistics help us recognize patterns. Stories help us remember people.

The survey presented in the previous chapter offered a descriptive snapshot of how students reported using artificial intelligence.

Those findings, however, represented only part of what I was noticing.

Throughout the school year, I also observed recurring patterns in the classroom—patterns that could not be fully represented by percentages or multiple-choice responses.

Some students struggled to begin.

Some gradually became resources for their classmates.

Some understood more than they were willing to demonstrate publicly.

Some high-achieving students rarely used AI at all.

Others continued to prefer pencils and paper despite having access to the same digital tools as their peers.

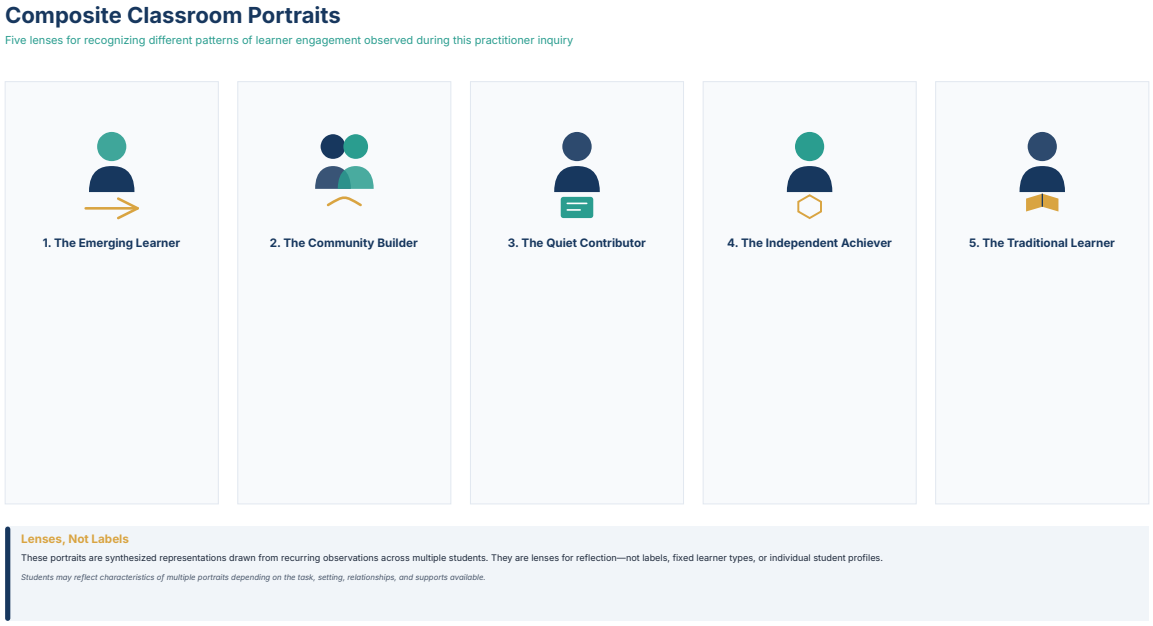
Those observations gradually evolved into what I call **Composite Classroom Portraits**.

The portraits that follow are **not individual student profiles**.

They are synthesized representations drawn from recurring characteristics and observations across multiple students. They are intended to protect student identity while illustrating patterns that may be familiar to other educators.

Their purpose is not to categorize students.

Their purpose is to offer lenses through which educators might recognize different ways learners engage, hesitate, persist, contribute, and make use of educational supports.



Portrait One

The Emerging Learner

The Emerging Learner wants to succeed but often struggles to begin.

Assignments may start with hesitation.

Blank pages can feel overwhelming.

Questions sometimes remain unasked because the student is unsure how—or whether—to ask them.

In my classroom, artificial intelligence occasionally appeared to reduce some of the friction associated with beginning.

A blank page became a first sentence.

Confusing directions became easier to approach.

An assignment that initially felt inaccessible sometimes began to feel possible.

These students still needed instruction.

They still benefited from encouragement.

They still required teacher feedback, structure, and accountability.

AI did not remove the need for teaching.

At times, it appeared to help some students take the first step.

What I Observed

For some students, beginning appeared to be one of the most significant barriers to engaging with academic work.

Possible Interpretation

Reducing the cognitive or emotional difficulty associated with beginning may create additional opportunities for students to engage with learning.

Reflection for Educators

What helps this student take the first step?

Questions for Future Research

How might reducing the friction of beginning relate to persistence, engagement, or later academic performance?

Portrait Two

The Community Builder

Some students gradually became informal classroom leaders.

Initially, they simply completed their own work successfully.

Over time, classmates began turning to them for help.

They explained directions.

Shared strategies.

Encouraged peers.

Modeled persistence.

In several instances, I observed that confidence and resourcefulness did not remain isolated within individual students. They appeared to influence classroom interactions as students began helping one another move forward.

Artificial intelligence may have supported some of these students individually, but what interested me most was what happened afterward:

They became resources for others.

What I Observed

Some students who demonstrated confidence or resourcefulness increasingly supported classmates through explanation, encouragement, and collaboration.

Possible Interpretation

Educational supports may influence not only individual engagement but also the ways students participate in a classroom learning community.

Reflection for Educators

How might I intentionally cultivate positive peer leadership without placing inappropriate responsibility on students?

Questions for Future Research

How do peer confidence, resourcefulness, and academic support influence the learning behaviors of classmates?

Portrait Three

The Quiet Contributor

The Quiet Contributor often understood more than classroom participation initially suggested.

These students might avoid presentations.

Rarely volunteer.

Or hesitate to speak during whole-class discussion.

Yet written work sometimes demonstrated understanding that was less visible in public classroom settings.

Artificial intelligence occasionally helped students organize ideas or prepare responses.

It did not necessarily eliminate the discomfort associated with sharing those ideas publicly.

What I Observed

Demonstrated understanding and willingness to communicate publicly did not always develop at the same pace.

Possible Interpretation

Some students may need greater support communicating what they know rather than additional support understanding the content itself.

Reflection for Educators

Am I assessing understanding—or primarily assessing the student's willingness to demonstrate it in a particular way?

Questions for Future Research

How might instructional design provide multiple ways for students to demonstrate understanding while still helping them develop communication confidence?

Portrait Four

The Independent Achiever

Not every successful student relied heavily on artificial intelligence.

Some high-achieving students in my classroom used AI rarely or not at all.

They already demonstrated strong organizational habits, confidence, persistence, and independent learning strategies.

Their presence served as an important reminder:

Artificial intelligence is not a prerequisite for achievement.

It is one educational support among many.

What I Observed

Students reached high levels of academic performance through different combinations of strategies and supports.

Possible Interpretation

Learners may require different resources at different times, and some students may already possess strategies that make additional technological support unnecessary.

Reflection for Educators

How do I continue challenging students who already demonstrate strong independence?

Questions for Future Research

How do highly self-directed learners decide when an educational support is useful—and when it is unnecessary?

Portrait Five

The Traditional Learner

Despite having access to Chromebooks and artificial intelligence, some students consistently preferred more traditional learning methods.

Vocabulary remained handwritten.

Notes were completed on paper.

Ideas were sometimes drafted with pencil before ever reaching a keyboard.

These students were not necessarily rejecting technology.

They were choosing resources and processes that worked for them.

Their choices reminded me that educational innovation should expand options rather than automatically eliminate existing ones.

What I Observed

In this classroom, equal access to technology did not produce equal patterns of use.

Possible Interpretation

Students continue to demonstrate different learning preferences and habits even within technology-rich environments.

Reflection for Educators

Am I providing multiple pathways for students to engage with content and demonstrate understanding?

Questions for Future Research

How might instructional design preserve meaningful learner choice while introducing students to new educational technologies?

Looking Across the Portraits

No student fit perfectly into a single portrait.

That point is essential.

A student might resemble an Emerging Learner during one assignment and an Independent Achiever during another.

A Quiet Contributor might become a Community Builder when working with trusted classmates.

A student who preferred handwriting in one context might choose artificial intelligence in another.

Students are not fixed categories.

They are developing learners whose behaviors can shift according to the task, environment, relationships, confidence, and supports available to them.

The **Composite Classroom Portraits are therefore lenses, not labels**.

They are offered as a way to help educators notice recurring patterns without reducing students to those patterns.

As I looked across these portraits, another pattern began to emerge.

Despite their differences, I repeatedly observed several behaviors:

Students began.

They asked questions.

They persisted.

They revised.

They took greater ownership.

They helped others.

At first, these behaviors seemed like ordinary classroom moments.

Over time, I began wondering whether they represented something more.

Could these behaviors help educators recognize learning **before** traditional measures of achievement captured it?

That question became the foundation of the **Pre-Achievement Framework**.

Chapter 6

The Pre-Achievement Framework

> *What if some of the most important indicators of learning appear long before achievement becomes measurable?*

As I reflected across the Composite Classroom Portraits in the previous chapter, one pattern became increasingly difficult to ignore.

The students differed in academic performance, confidence, learning preferences, motivation, and their use of artificial intelligence.

Yet across those differences, I repeatedly observed several similar behaviors as students began engaging more fully with learning.

A student finally started writing.

A hesitant learner asked a question.

A student continued working after becoming frustrated.

A classmate returned to revise an assignment.

Another began checking on missing work or asking about a grade.

Students helped one another move forward.

None of these behaviors guaranteed academic success.

They did not prove that learning had occurred.

And they did not establish that artificial intelligence caused anything.

But in this classroom, they often became visible while learning was still developing—and sometimes before improvement appeared in grades or other traditional measures of achievement.

That raised a question:

What if educators have important evidence of learning in front of them before traditional measures are able to capture it?

That question became the foundation of what I now call the **Pre-Achievement Framework**.

What Achievement Measures—and What It May Miss

Traditional measures of academic achievement remain essential.

Grades.

Assessments.

Projects.

Presentations.

Written work.

Classroom discussions.

These measures help educators understand what students know and what they are able to demonstrate.

The Pre-Achievement Framework does not challenge their importance.

Instead, it asks educators to pay attention to something that can happen earlier.

Before a grade improves, a student may first begin.

Before a stronger final product appears, a student may first ask for clarification.

Before greater independence becomes visible, a student may first persist through frustration.

Before academic ownership is reflected in an outcome, a learner may first make a decision to try again.

Those moments can be easy to overlook because they do not always appear in a gradebook.

In my classroom, however, they often represented meaningful movement in the learning process.

Defining the Pre-Achievement Framework

The **Pre-Achievement Framework** is a practitioner-developed conceptual framework that organizes six observable learner behaviors I repeatedly noticed in this classroom as students engaged with learning, sometimes before measurable academic improvement became visible.

The framework is intended to serve as an **observational lens**.

It is not a diagnostic tool.

It is not an assessment instrument.

It is not a prediction model.

And it does not claim that demonstrating these behaviors will inevitably result in academic achievement.

Instead, the framework gives educators a language for noticing forms of learner engagement that may otherwise pass without recognition.

The question is not:

Has this student achieved yet?

The additional question becomes:

What is this student doing that suggests learning may be beginning to take shape?

Observable Pre-Achievement Behaviors

The framework currently identifies six recurring behaviors that emerged from this practitioner inquiry.

Beginning

The student initiates academic work rather than remaining immobilized by uncertainty, confusion, or hesitation.

Beginning may be as simple as writing the first sentence, opening the assignment, attempting the first problem, or identifying the next step.

Asking Questions

The student seeks clarification, feedback, additional information, or deeper understanding.

The significance is not simply that a question was asked, but that the learner actively sought a way to move forward.

Persisting

The student continues working despite difficulty, uncertainty, frustration, or an initial unsuccessful attempt.

Persistence does not require struggling indefinitely. It may include recognizing when another resource or form of support is needed.

Revising

The student returns to work after receiving feedback, recognizing an error, or identifying an opportunity for improvement.

Revision reflects a willingness to treat the first attempt as part of the learning process rather than the final product.

Taking Ownership

The student demonstrates increasing responsibility for their learning.

This may include monitoring missing work, asking about progress, seeking feedback, selecting appropriate resources, or making independent decisions about what to do next.

Helping Others

The student contributes to the learning of classmates through explanation, encouragement, collaboration, modeling, or sharing an appropriate strategy.

Helping others recognizes that learning can become visible not only through individual performance but also through participation in a classroom learning community.

These behaviors did not always appear in the same order.

Students did not demonstrate all six.

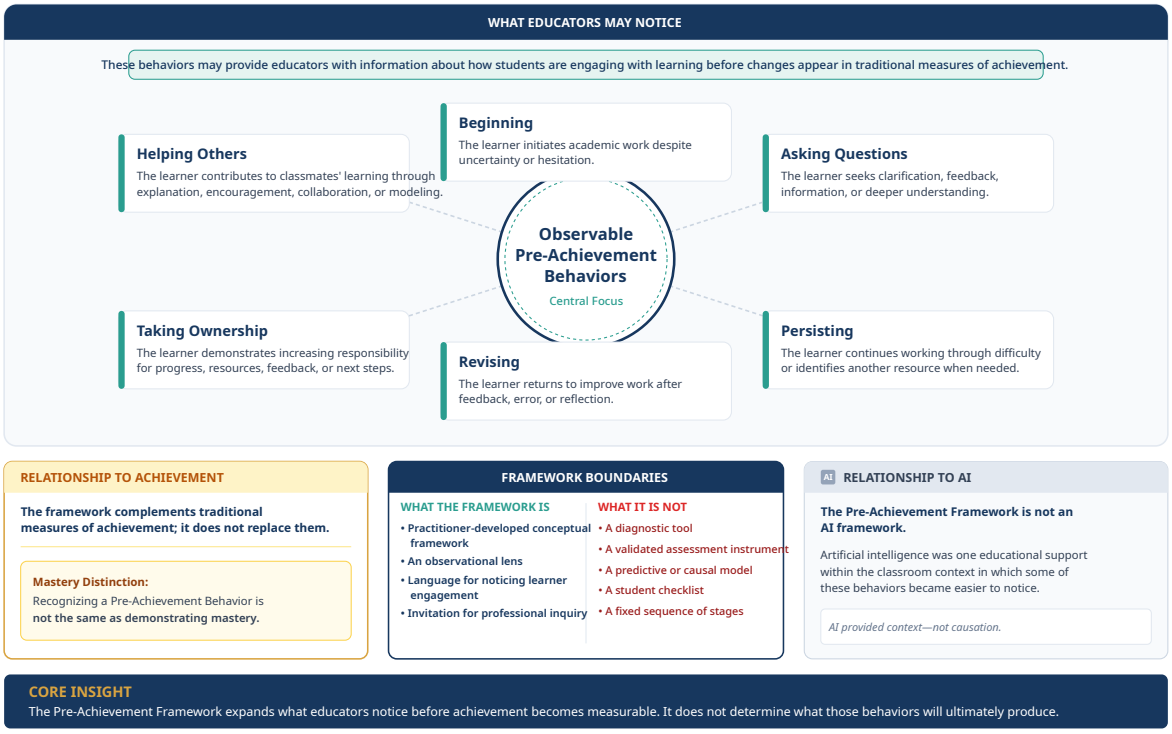
And an individual student's behavior could change depending on the assignment, content, relationships, confidence, or support available.

For that reason, the framework should not be interpreted as a sequence or checklist.

The six behaviors are **observable patterns—not stages students must complete.**

Figure 3. The Pre-Achievement Framework

An observational lens for recognizing learner behaviors that may become visible while learning is still developing



Note: The six behaviors emerged from practitioner observations in one sixth-grade Social Studies classroom. The framework has not been validated, and relationships between these behaviors and later academic outcomes have not been established.

The Relationship to Artificial Intelligence

One of the most important distinctions in this report is this:

The Pre-Achievement Framework is not an AI framework.

Artificial intelligence was part of the context in which I began noticing these behaviors.

At times, AI appeared to reduce some of the friction associated with beginning.

It could provide another place for students to seek clarification.

It sometimes supported brainstorming or revision.

But the behaviors themselves were not created by AI.

Students can begin without AI.

Ask questions without AI.

Persist without AI.

Revise without AI.

Take ownership without AI.

Help classmates without AI.

Artificial intelligence was one educational support within a much broader classroom ecosystem.

Its importance to this inquiry was not that it created learning behaviors.

Its importance was that, in some instances, it made behaviors I had previously overlooked easier for me to notice.

Observation Before Interpretation

Throughout this report, I have tried to distinguish between three things:

What I observed.

What I believe those observations may suggest.

What future evidence would be needed to establish.

That distinction is especially important here.

I observed students beginning assignments.

I observed students asking questions.

I observed students persisting through difficulty.

I observed students revising.

I observed students taking greater responsibility for their work.

I observed students helping classmates.

I interpret these behaviors as potentially meaningful indicators of engagement with learning.

What I **cannot** conclude from this practitioner inquiry is that these behaviors predict achievement, cause achievement, or will operate in the same way across other classrooms.

Those are questions for future investigation.

The purpose of the framework is therefore not to convert observation into certainty.

It is to make observation more intentional.

An Invitation to Observe Differently

The Pre-Achievement Framework is offered as an invitation.

To slow down.

To notice earlier.

To recognize progress that may not yet appear on a report card.

To ask what a student's behavior may be revealing about their relationship with learning.

And to remain curious enough to investigate further.

Perhaps some of the classroom moments educators routinely consider small—

a student beginning,

asking,

persisting,

revising,

taking ownership,

or helping another learner—

deserve greater attention.

Not because they guarantee achievement.

But because they may tell us something important about learning **while it is still unfolding**.

If future educators and researchers observe similar patterns, challenge these categories, refine them, or discover something entirely different, then the framework will have served its purpose.

It will have helped begin a better conversation about what educators choose to notice.

Chapter 7: Teaching What We Notice

What we choose to notice in our classrooms shapes what we choose to teach, celebrate, and support.

The Pre-Achievement Framework is not a curriculum.

It is not an intervention.

It is not an assessment system.

And it is not a new teaching method.

It is an observational lens intended to help educators recognize learner behaviors that may otherwise receive little attention because they occur before traditional measures of achievement capture progress.

Traditional assessment helps educators ask:

What has the student learned?

The Pre-Achievement Framework adds another question:

How is the student engaging with learning while it is still unfolding?

These questions are not competitors.

They are companions.

Observation Changes Instruction

One of the most important things I learned through this practitioner inquiry was that **noticing differently gradually changed how I responded to students**.

When a student who usually hesitated finally began independently, that moment mattered.

When a student asked for clarification instead of abandoning the assignment, that mattered.

When a learner returned to revise work after feedback, that mattered.

When a student persisted through frustration, checked on missing work, or helped a classmate, those moments gave me information I could use while teaching.

The grade might not have changed yet.

The assessment result might not have changed yet.

But something about the student's engagement with learning had changed.

Recognizing those moments gave me opportunities to respond sooner.

I could encourage persistence while it was happening.

Acknowledge a thoughtful question.

Reinforce an appropriate choice of resource.

Recognize revision as progress rather than simply expecting a corrected product.

Or encourage a student who was beginning to take greater responsibility for their own learning.

The framework therefore did not tell me **what to teach**.

It influenced **what I noticed while teaching**.

From Answer Giver to Learning Coach

Paying closer attention also changed the kinds of questions I asked students.

Rather than immediately solving a problem for a student, I increasingly tried to help the student determine what to do next.

I might ask:

What do you already understand?

Where did you get stuck?

What resource could help you move forward?

What question do you need answered?

What could you try before giving up?

Who or what might help you think this through?

Sometimes the appropriate resource was a textbook.

Sometimes notes.

A classroom map.

A classmate.

Me.

And sometimes artificial intelligence.

As described earlier in this report, the goal was not dependence upon one resource. It was increasing **resourcefulness**.

In that sense, the teacher's role remained essential.

Technology could provide information or another point of access.

But I still had to interpret what I was observing, understand the student in front of me, provide instruction, establish expectations, give feedback, and decide when support should increase—or when I needed to step back and allow the learner to struggle productively.

Celebrating Progress Without Confusing It With Achievement

This distinction is important.

Recognizing a Pre-Achievement Behavior does **not** mean pretending that a student has mastered content when they have not.

Beginning an assignment is not the same as completing it successfully.

Asking a question is not the same as understanding the answer.

Persisting does not guarantee mastery.

Revising does not guarantee accuracy.

Taking ownership does not automatically result in stronger academic performance.

Helping another student does not replace demonstrating one's own understanding.

The framework does not ask educators to lower the standard for achievement.

It asks them to recognize meaningful movement **toward** it.

There is room to say both:

You still have work to do.

and:

I noticed the progress you made today.

Those statements do not contradict one another.

For some students, recognizing the second may help sustain the effort required to eventually accomplish the first.

Questions for Educators

The Pre-Achievement Framework invites educators to consider questions such as:

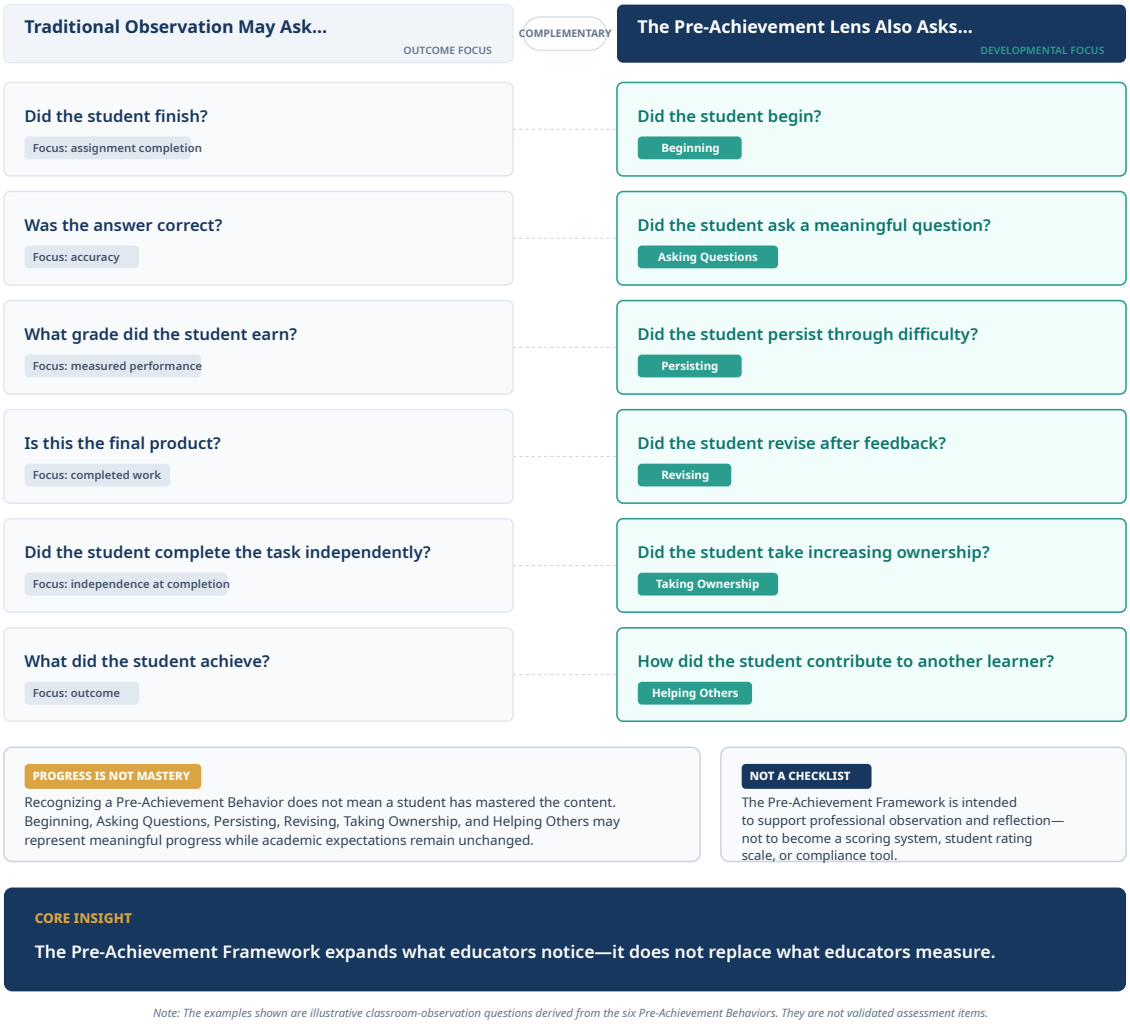
- Which Pre-Achievement Behaviors do I already notice?
- Which behaviors might I unintentionally overlook?
- Which students begin readily, and which students struggle to take the first step?
- Who is asking for clarification?
- Who persists after an unsuccessful attempt?
- Who is willing to revise?
- Which students are beginning to take greater responsibility for their learning?
- Who quietly contributes to the learning of others?
- How do I respond when I notice these behaviors?
- Am I recognizing progress without confusing it with mastery?
- What classroom conditions make these behaviors easier—or harder—for students to demonstrate?

These are not intended to become another checklist teachers must complete.

They are prompts for professional observation.

Figure 4. Teaching What We Notice

How the Pre-Achievement Framework expands classroom observation without replacing traditional measures of achievement



Note: The examples shown are illustrative classroom-observation questions derived from the six Pre-Achievement Behaviors. They are not validated assessment items.

An Invitation to Practice

The Pre-Achievement Framework is not meant to turn ordinary classroom behaviors into another scoring system.

I would be concerned if **Beginning**, **Asking Questions**, **Persisting**, **Revising**, **Taking Ownership**, and **Helping Others** simply became six more boxes for teachers to check.

That would miss the point.

The framework is intended to encourage closer observation.

To help educators notice earlier.

To recognize when a student may be changing their relationship with learning before that change is visible in an academic outcome.

And then to ask:

What does this student need from me next?

Sometimes the answer will be encouragement.

Sometimes feedback.

Sometimes greater challenge.

Sometimes additional instruction.

Sometimes accountability.

And sometimes the best response may simply be to recognize the moment and allow the student to keep going.

Learning does not become less rigorous because educators notice its early signs.

If anything, closer observation may help us respond more intentionally while growth is still taking shape.

Closing Reflection

Students do not always wait until the end of an assignment, assessment, quarter, or school year to show us that something is changing.

Sometimes they show us when they begin.

When they ask.

When they persist.

When they revise.

When they take ownership.

When they help another learner.

What educators choose to notice can influence what they are able to support.

The next question is whether this way of seeing learning has implications beyond one classroom.

Chapter 8

Implications Beyond One Classroom

> *Every meaningful educational idea begins somewhere. The question is not whether one classroom provides all the answers, but whether it encourages better questions.*

The Pre-Achievement Framework emerged from one sixth-grade Social Studies classroom.

That boundary matters.

The observations described throughout this report should not be assumed to apply automatically to other grade levels, schools, subject areas, or student populations.

At the same time, practitioner inquiry has value precisely because classrooms can surface questions worthy of broader investigation.

This framework is offered in that spirit.

Not as a finished theory.

Not as a mandate.

Not as a new accountability system.

But as a starting point for professional dialogue about what educators notice before achievement becomes measurable.

If similar behaviors appear in other settings, the implications could extend well beyond one classroom.

Implications for Classroom Teachers

Teachers make hundreds of decisions each day, many of them based on what they notice students doing.

Did the student begin?

Did they ask for clarification?

Did they continue after becoming frustrated?

Did they respond to feedback?

Did they begin monitoring their own progress?

Did they contribute to another student's learning?

The Pre-Achievement Framework suggests that these moments may deserve more intentional attention.

Not because they replace academic outcomes.

But because they can give teachers information **while learning is still developing**.

Recognizing those behaviors may create opportunities to respond earlier—with encouragement, feedback, additional instruction, accountability, or greater challenge.

The framework therefore depends heavily on professional judgment.

It does not tell teachers what a behavior means.

It invites them to notice the behavior and ask a better question about what the learner may need next.

Implications for Instructional Leadership

Instructional coaches and school leaders frequently observe classrooms through lenses focused on pedagogy, curriculum, engagement, classroom management, and evidence of student learning.

The Pre-Achievement Framework offers an additional possibility.

A walkthrough might ask not only:

What is the teacher doing?

but also:

What are students beginning to do as learners?

For example:

- Who begins without repeated prompting?
- Who seeks clarification?
- Who persists after difficulty?
- Who revises after feedback?
- Who demonstrates increasing ownership?
- How are students supporting one another?

These questions should not become another compliance checklist.

Their value lies in creating richer professional conversations about the relationship between instruction and learner behavior.

For an instructional coach, that might mean helping a teacher notice a student whose persistence has improved even though the student's grade has not yet changed.

For a principal, it might mean recognizing classroom conditions that support questioning, revision, or productive independence.

The framework does not replace existing observation systems.

It may simply broaden the conversation.

Implications for Teacher Preparation

New teachers understandably spend enormous energy learning how to plan lessons, manage classrooms, assess learning, and deliver instruction.

But another professional skill deserves attention:

Learning how to observe.

Early in my own first year in the classroom, I was often focused on whether the lesson worked.

Did students finish?

Did we get through the material?

Was the class under control?

Those questions mattered.

Over time, however, I began asking different ones.

Who is beginning now who used to hesitate?

Who is finally asking questions?

Who is becoming more resourceful?

Who keeps trying after getting something wrong?

Who is quietly becoming a leader?

The ability to recognize those shifts can shape instructional decisions before traditional data catches up.

Teacher preparation programs might therefore consider observation not merely as a classroom-management skill, but as part of instructional judgment.

Learning to teach includes learning to see.

Implications for Educational Technology

The findings in this report also raise questions for schools and organizations evaluating educational technology.

A tool may be technically powerful and still have very different effects across different learners.

Some students in my classroom used AI regularly.

Some used it occasionally.

Others did not use it at all.

Even among students who used AI, the reported purposes differed.

That variation suggests that evaluating educational technology solely by whether students have access to it may miss an important part of the picture.

Schools might also ask:

- What barriers does this tool appear to reduce?
- Which students choose to use it?
- Which students avoid it?
- How does its use interact with classroom expectations and instructional practice?
- Does it encourage greater resourcefulness—or dependence?
- What kinds of learner behaviors become more or less visible when the tool is introduced?

Those questions move the conversation beyond adoption.

They ask how technology functions **inside an existing learning environment**.

That distinction is particularly important with artificial intelligence.

The question is not simply whether a school has AI.

The question is what students and teachers actually do with it.

Implications for Research

Perhaps the most important implications of the Pre-Achievement Framework are questions that this report cannot answer.

Do the same six behaviors appear across other grade levels?

Do they appear in mathematics, science, English language arts, career and technical education, or elementary classrooms?

Can multiple educators reliably identify the same behaviors?

Do particular behaviors tend to appear together?

How stable are they across different assignments or instructional settings?

How do they relate to established constructs such as engagement, motivation, self-efficacy, metacognition, or formative assessment (see, e.g., Bandura, 1997; Black & Wiliam, 1998)?

Do any of these behaviors have a meaningful relationship with later academic outcomes?

And perhaps most importantly:

Can educators recognize these behaviors without turning them into another system of labels, scores, or compliance?

Those questions require evidence beyond one classroom.

Some may ultimately strengthen the framework.

Others may challenge it.

Still others may reveal that the categories need to be revised, expanded, combined, or abandoned.

That is not a weakness of practitioner inquiry.

It is the reason further inquiry matters

A Contribution to the Conversation

The purpose of this report has never been to settle the conversation surrounding artificial intelligence in education.

Nor is it to argue that the Pre-Achievement Framework should be adopted as a finished model.

The contribution is more modest.

One classroom raised a question.

Student responses added another layer.

Classroom observations revealed recurring patterns.

Those patterns became a framework.

Now the framework can be examined by others.

If teachers begin noticing their students differently...

If instructional leaders ask new questions during classroom observations...

If teacher educators help novice teachers develop stronger observational habits...

If educational technology developers think more carefully about the learner behaviors their tools may support...

If researchers decide these questions are worthy of systematic investigation...

Then the inquiry will have extended beyond the classroom where it began.

That is enough.

Because practitioner knowledge does not have to provide the final answer to make a meaningful contribution.

Sometimes its most valuable role is helping the field recognize a question that deserves to be asked.

Chapter 9: Limitations and Future Research

The purpose of practitioner inquiry is not to provide final answers. It is to generate better questions through careful observation and reflective practice.

Every educational inquiry has boundaries.

This report is no exception.

The observations, interpretations, survey findings, Composite Classroom Portraits, and Pre-Achievement Framework presented throughout these pages emerged from one sixth-grade Social Studies classroom during the 2025–2026 school year.

That context is not incidental.

It defines what this report can—and cannot—claim.

Recognizing those limitations does not weaken the inquiry. It strengthens it by distinguishing what was observed from what still requires investigation.

One Classroom, One Context

This inquiry reflects the experiences of one teacher and one classroom community in Gary, Indiana.

Students shared a particular school environment, classroom culture, set of relationships, instructional routines, and local context.

Different classrooms may reveal different patterns.

A mathematics classroom may look different.

An elementary classroom may look different.

A suburban, rural, private, charter, or international setting may produce entirely different observations.

The Pre-Achievement Framework should therefore not be interpreted as a universal description of how all students learn.

It is a conceptual framework that emerged from one setting and now requires examination in others.

Practitioner Inquiry Is Not Causal Research

This report was not designed as an experimental study.

There was no control group.

Students were not randomly assigned to use or avoid artificial intelligence.

AI use was not introduced as a standardized intervention.

And the inquiry was not designed to determine whether one particular educational support caused changes in student achievement.

Throughout the year, I observed students beginning assignments, asking questions, persisting, revising, taking greater ownership, and helping classmates.

Those observations do **not** establish that AI caused those behaviors.

Nor do they establish that demonstrating Pre-Achievement Behaviors will inevitably lead to stronger grades, test scores, or other measures of achievement.

The framework is an **observational lens—not a causal model or validated predictor of academic success**.

That distinction must remain central to any future use of the framework.

Limits of the Student Survey

The student survey provides another important boundary.

The survey was designed as a brief classroom instrument intended to help me understand how students described their own AI use.

It was not a validated research instrument.

It relied primarily on closed-choice questions.

It measured student self-report rather than independently verified patterns of AI use.

And because the question about whether AI made **starting or understanding work easier** combined two experiences into a single item, the responses cannot determine whether students were referring specifically to beginning, comprehension, or both.

A small number of students also accidentally submitted the survey more than once. Those duplicate submissions were removed during analysis.

For these reasons, the survey findings should be interpreted as a **descriptive snapshot of student perceptions within this classroom**, not as evidence that AI improved learning.

Future inquiry would benefit from:

- separate questions about beginning and understanding;
- open-ended student responses;
- interviews or focus groups;
- repeated measures over time;
- comparisons between student self-report and classroom observation.

The Role of Practitioner Perspective

I occupied two roles throughout this inquiry:

teacher and **practitioner-inquirer**.

I designed the lessons.

Built relationships with students.

Administered the survey.

Observed classroom behavior.

Interpreted what I saw.

And eventually developed the framework described in this report.

That proximity created an important advantage: I could observe students within the daily context of teaching rather than during isolated research visits.

But it also created the possibility of bias.

I may have noticed some behaviors because I had already begun looking for them.

My relationships with students may have influenced how I interpreted their actions.

And because I developed the framework myself, I have a responsibility to remain particularly cautious about treating my interpretations as established fact.

Rather than attempting to eliminate that practitioner perspective, I have tried to make it visible.

Future research involving multiple observers would help determine whether other educators identify similar behaviors under similar conditions.

Artificial Intelligence Was Only One Variable

Student learning never occurred in isolation.

Many interacting conditions were present throughout the year:

- classroom relationships;
- instructional design;
- project-based learning;
- teacher feedback;
- peer support;
- attendance;
- motivation;
- prior academic experiences;
- family and community influences;
- access to educational resources;
- classroom culture.

Artificial intelligence was one educational support within that much larger learning ecosystem.

Any change I observed in a student could have reflected several of those influences simultaneously.

This is another reason the report does not attempt to attribute behavioral changes directly to AI.

In many ways, AI became significant to this inquiry because it helped draw my attention toward the learner—not because it provided a single explanation for what I observed.

Limits of the Composite Classroom Portraits

The Composite Classroom Portraits were created to illustrate recurring patterns while protecting student identities.

They are not individual case studies.

They do not represent statistically derived learner categories.

And students should not be assigned to them as fixed types.

A learner could resemble different portraits depending on the assignment, classroom context, available support, or moment in the school year.

The portraits should therefore be understood exactly as they are presented:

lenses, not labels.

Future inquiry may reveal that the portraits need to be revised, expanded, combined, or abandoned entirely.

Questions Worth Investigating

The limitations of this report point directly toward future research.

Among the questions worth examining are:

- Do similar Pre-Achievement Behaviors emerge across different grade levels?
- Do they appear across different subject areas?
- Can multiple educators reliably identify the same behaviors?
- Do particular Pre-Achievement Behaviors tend to appear together?
- How stable are these behaviors across assignments and instructional settings?

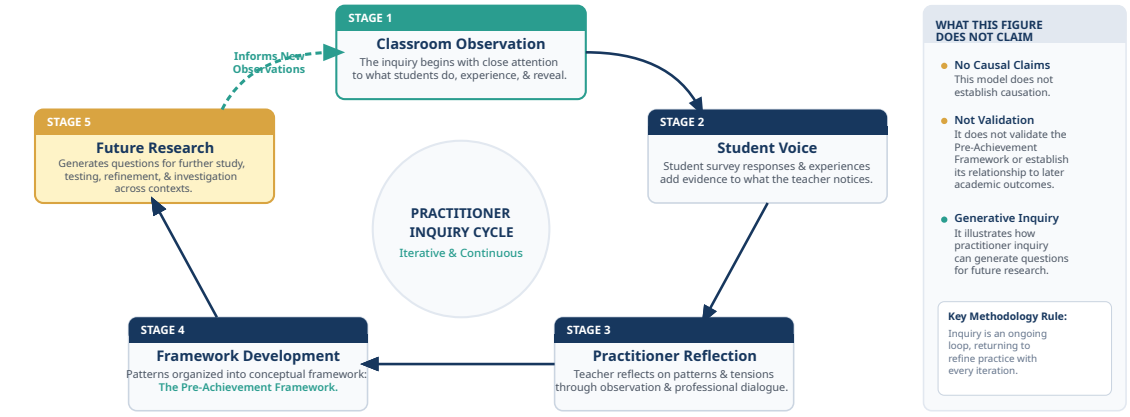
- How do the behaviors relate to established constructs such as motivation, engagement, self-efficacy, metacognition, and formative assessment?
- Do any Pre-Achievement Behaviors show meaningful relationships with later academic outcomes?
- How do students themselves interpret these behaviors?
- Do students recognize their own changes in beginning, persistence, revision, ownership, or peer support?
- How might educators support these behaviors without converting the framework into another system of compliance, scoring, or labeling?
- What role, if any, does artificial intelligence play in helping particular learners overcome barriers to beginning or understanding work?

These questions remain unanswered.

That is precisely why they deserve investigation.

Figure 5. From Classroom Observation to Future Research

An iterative model of how practitioner inquiry moves from classroom noticing to broader investigation



This figure presents practitioner inquiry as an iterative process. It is intended to show how classroom observation, student voice, reflection, framework development, and future research can inform one another over time.

An Invitation Rather Than a Conclusion

The Pre-Achievement Framework is offered as a beginning rather than an endpoint.

It should be questioned.

Tested.

Refined.

Expanded.

And, if evidence requires it, challenged.

Its value will not ultimately be determined by how compelling it appears in this report.

Its value will be determined by whether educators and researchers find that the framework helps them observe something meaningful—and whether systematic investigation supports, revises, or rejects the relationships proposed here.

That is how practitioner knowledge should enter a broader professional conversation.

Not as certainty.

As a question worthy of serious attention.

Closing Reflection

The limitations of this inquiry define its boundaries.

They do not erase what was observed.

One classroom cannot establish a universal framework.

One survey cannot establish causation.

One practitioner cannot independently validate an educational construct.

But one classroom **can** surface a question.

And sometimes a question is where meaningful inquiry begins.

The next chapter returns to the students who made that question possible—and to what they ultimately taught me about learning.

Chapter 10

What My Middle School Students Taught Me About Learning

The most meaningful moments of learning are often invisible—until someone chooses to notice them.

When I began paying closer attention to artificial intelligence in my classroom, I expected to learn something about technology.

Instead, my students changed the question.

Over the course of the school year, I began noticing that learning rarely announced itself first through a correct answer, a higher grade, or a completed assessment.

Sometimes it began with something much smaller.

A student deciding to start.

A question that had previously gone unasked.

Another attempt after frustration.

A willingness to revise.

A student checking on their own progress.

A classmate helping someone else move forward.

These moments were easy to overlook because they did not always produce an immediate academic result.

But they mattered.

They were often signs that something about the student's relationship with learning was beginning to change.

Artificial intelligence did not create those behaviors.

At times, it appeared to make some of them easier to observe.

Students who had hesitated at blank pages sometimes found a place to begin.

Students used AI to seek clarification, organize ideas, or support revision.

Others used it rarely or not at all.

Those differences became part of the lesson.

The most important question was no longer:

Is AI improving achievement?

It became:

What happens before achievement that educators may not be noticing?

That question led to the development of the **Pre-Achievement Framework**.

What the Framework Ultimately Asks Us to Notice

The Pre-Achievement Framework does not argue that grades, assessments, projects, or other measures of achievement are unimportant.

They remain essential.

The framework asks educators to notice something additional:

Beginning.

Asking Questions.

Persisting.

Revising.

Taking Ownership.

Helping Others.

These **Pre-Achievement Behaviors** are not substitutes for achievement.

They are not guarantees of it.

And this report does not establish that they predict later academic success.

They are observable behaviors that, in this classroom, sometimes became visible while learning was still developing.

That distinction has changed how I think about progress.

Achievement tells us where students arrived.
Pre-Achievement Behaviors may help us notice how they are beginning to get there.

The Human Work of Learning

The longer I reflected on this inquiry, the less the story became about artificial intelligence.

Whether students used AI, textbooks, maps, handwritten notes, classmates, teacher feedback, or some combination of those resources, the underlying work of learning remained deeply human.

Students still had to decide whether to begin.

They still had to navigate uncertainty.

Ask for help.

Evaluate information.

Respond to feedback.

Persist.

Make choices.

Develop judgment.

And increasingly take responsibility for what happened next.

Technology can change the resources available to learners.

It does not eliminate the human work of becoming one.

That may be the most important thing my students taught me.

Learning Before Measurement

As educators, we are routinely asked to measure what students know.

That responsibility matters.

But this inquiry has made me wonder whether we should devote equal attention to what happens **before** those measurements change.

A student may still be below grade level and be making meaningful progress.

A student may still have missing work and be beginning to take greater ownership.

A student may still struggle academically while demonstrating more persistence than they did a month earlier.

Recognizing those changes does not require educators to lower expectations.

It requires us to see more of the journey.

There is a difference between saying:

You have achieved the standard.

and saying:

I see evidence that you are changing as a learner.

Both statements can matter.

A Final Invitation

The **Pre-Achievement Framework** is not complete.

It was never intended to be.

It emerged from one classroom, one practitioner inquiry, and one teacher learning to pay closer attention to his students.

Others may observe different behaviors.

Researchers may find that some parts of the framework align with established constructs while others require revision.

Teachers may challenge the categories.

Students themselves may help us understand these behaviors differently.

That is exactly what should happen.

The framework is offered not as a finished answer, but as an invitation:

Observe.

Question.

Test.

Refine.

Keep learning.

If this report helps an educator notice something in a student that might otherwise have been overlooked, then the inquiry has already traveled beyond the classroom where it began.

Closing Reflection

My students may never fully realize how much they changed the way I see teaching.

I began this journey believing I was studying how students used artificial intelligence.

I finished it realizing they had taught me something far more important:

Learning deserves to be noticed before it is measured.

And perhaps that is where the next question begins.

Appendices

Appendix A

Student Survey Instrument

Purpose

This appendix reproduces the three substantive classroom survey questions analyzed in this report. The survey was administered between April 1 and May 22, 2026. It was designed as a brief classroom instrument rather than a validated research measure.

Survey Questions

1. Have you ever used AI tools (like ChatGPT or similar) to help you with schoolwork?

2. If you have used AI, what have you used it for?

3. If you have used AI, did it make starting or understanding your work easier?

Analysis Note

Question 1 was analyzed using the response categories Never, Occasionally, and Regularly. Analyses of Questions 2 and 3 were limited to the 69 respondents who identified themselves as AI users by selecting Occasionally or Regularly in Question 1. Because Question 3 combined “starting” and “understanding” in a single item, its responses cannot distinguish which experience students were describing.

Appendix B

Student Survey Summary

Participants and Cleaning

The survey generated 114 submissions. Accidental duplicate submissions were removed and one obvious spelling variation was reconciled, resulting in 95 unique respondents. Follow-up analyses were limited to 69 students who self-reported using AI occasionally or regularly for schoolwork.

- Survey window: April 1–May 22, 2026
- Classroom context: sixth-grade Social Studies in a turnaround middle school in Gary, Indiana
- Unique respondents after cleaning: N = 95
- Self-reported AI users included in follow-up analyses: N = 69

Figure 2A — How Often Students Reported Using AI

- Occasionally — 47 students (49.5%)
- Regularly — 22 students (23.2%)
- Never — 26 students (27.4%)

Combined: 69 of 95 students (72.6%) reported using AI at least occasionally for schoolwork.

Figure 2B — What Students Reported Using AI For

- Research or understanding topics — 35 students (50.7%)
- Getting started on assignments — 28 students (40.6%)
- Math help — 27 students (39.1%)
- Studying or test preparation — 23 students (33.3%)
- Writing—essays, responses, or summaries — 22 students (31.9%)
- Brainstorming ideas — 20 students (29.0%)

Students could select more than one response, so percentages do not sum to 100 percent.

Figure 2C — Did AI Make Starting or Understanding Work Easier?

- Yes, a little — 37 students (53.6%)
- Yes, a lot — 25 students (36.2%)

- Not really — 4 students (5.8%)
- Not at all — 3 students (4.3%)

Combined: 62 of 69 AI users (89.9%) reported that AI made starting or understanding their schoolwork easier at least to some degree. This is a measure of student perception, not evidence that AI improved academic learning or achievement.

Appendix C

Practitioner Inquiry Methodology

Nature of the Inquiry

This report reflects a practitioner inquiry conducted during the 2025–2026 school year. Practitioner inquiry treats educators' systematic examination of their own practice as a source of professional learning and questions for further investigation (Cochran-Smith & Lytle, 2009; Dana & Yendol-Hoppey, 2020).

Evidence Sources

- Classroom observations during the 2025–2026 school year in one sixth-grade Social Studies classroom
- A student AI-use survey administered from April 1 through May 22, 2026
- Reflective examination of classroom instruction, student work, interactions, and learning behaviors
- Professional dialogue with educators, researchers, school leaders, parents, and technology professionals

Survey Cleaning and Analysis

The survey was intended to be completed once by each student. When repeat submissions were identified, the earliest response was retained. One obvious spelling variation was reconciled during cleaning. A small number of submissions contained conflicting responses; rather than forcing those rows into an interpretation, follow-up analyses were limited to the 69 respondents who identified themselves as AI users in the first survey question.

Boundaries

This project was not designed as an experimental or causal study. It did not include a control group, random assignment, statistical hypothesis testing, or a standardized intervention. The survey was a brief classroom instrument, not a validated research measure. The Composite Classroom Portraits are synthesized lenses rather than individual case studies or statistically derived learner categories.

Appendix D

Practitioner Inquiry Timeline

2025–2026 School Year

Classroom observations accumulated as I paid closer attention to student engagement, resource use, and AI-related learning behaviors.

April 1–May 22, 2026

Student AI-use survey administered. The survey generated 114 submissions and 95 unique respondents after duplicate cleaning and reconciliation.

May–June 2026

Recurring classroom patterns were organized into the Composite Classroom Portraits.

June–July 2026

A 13-part LinkedIn series and professional dialogue with educators, researchers, school leaders, parents, and technology professionals challenged and refined emerging interpretations.

July–August 2026

The Pre-Achievement Framework was named, refined, reviewed, and prepared for publication alongside the final figure set.

Appendix E

Figure Notes

Figure 1 — The Learning Ecosystem

Illustrates the classroom conditions, instructional practices, and educational supports surrounding student learning during this practitioner inquiry. Artificial intelligence is shown as one support within a broader ecosystem.

Figure 2A — How Often Students Reported Using AI

Summarizes self-reported AI-use frequency among 95 unique respondents.

Figure 2B — What Students Reported Using AI For

Summarizes reported purposes of AI use among the 69 respondents who identified themselves as AI users. Students could select more than one response.

Figure 2C — Did AI Make Starting or Understanding Work Easier?

Summarizes perceptions among the 69 self-reported AI users. Because the survey combined “starting” and “understanding,” the figure does not distinguish between those experiences and does not measure learning outcomes.

Chapter 5 Illustration — Composite Classroom Portraits

Presents five synthesized lenses for recognizing recurring patterns of learner engagement. The portraits are not labels, fixed learner types, or individual student profiles.

Figure 3 — The Pre-Achievement Framework

Presents the six formal Pre-Achievement Behaviors as a non-sequential observational framework and states the framework’s methodological boundaries.

Figure 4 — Teaching What We Notice

Shows how the Pre-Achievement lens can expand classroom observation without replacing traditional measures of achievement.

Figure 5 — From Classroom Observation to Future Research

Illustrates practitioner inquiry as an iterative cycle that returns future investigation to new classroom observation.

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About the Author

Wendell D. Mosby

Wendell D. Mosby is a middle school social studies teacher, youth development professional, nonprofit founder, and practitioner-inquirer whose work explores the intersection of learning, educational technology, and student agency.

Although this report is grounded in his first year as a classroom teacher, it reflects more than two decades of experience serving young people through education, workforce development, nonprofit leadership, and community engagement. Throughout his career, he has worked alongside students in classrooms, after-school programs, workforce initiatives, and youth-serving organizations, always with a focus on helping young people discover their potential and build confidence in their ability to succeed.

During the 2025–2026 school year, Wendell conducted a practitioner inquiry into how students were using artificial intelligence in his sixth-grade Social Studies classroom. What began as an exploration of AI evolved into a broader investigation of observable learner behaviors that sometimes became visible before measurable academic achievement. Those observations led to the development of the Pre-Achievement Framework, a practitioner-developed conceptual framework that encourages educators to notice six learner behaviors while remaining cautious about causal or predictive claims.

His work is grounded in a simple belief:

Learning deserves to be noticed before it is measured.

Beyond the classroom, Wendell is the founder of **DJing for Diabetes Foundation, Inc.**, a nonprofit organization dedicated to empowering children and families living with Type 1 and Type 2 diabetes through music, celebration, and community. His advocacy is inspired by his son, Myles, who lives with Type 1 diabetes, and by his belief that every young person deserves to be seen, encouraged, and celebrated.

Wendell hopes this report serves as the beginning of a larger conversation among educators, school leaders, researchers, and policymakers about how schools recognize learning, cultivate student agency, and prepare learners for a future in which human potential and artificial intelligence increasingly intersect.

"The earliest signs of learning are often the easiest to overlook. My hope is that this work helps educators notice them—and nurture them."

— Wendell D. Mosby

Acknowledgments

This report began as a classroom observation, but it became possible because of the people who encouraged me to keep asking questions.

First and foremost, I want to thank my students.

Every observation in these pages began with your willingness to try, to struggle, to ask questions, to support one another, and to keep learning. Your identities have been protected, and the classroom portraits are composite representations rather than individual profiles. Even so, your influence is present throughout this report. You reminded me that some of the most important moments in education occur long before they appear in a gradebook.

To my wife, **Tiffany**, thank you for your unwavering encouragement, thoughtful conversations, and constant reminder to **"become your greatest resource."** What began as wisdom shared with our son became one of the guiding principles of my classroom and one of the foundational ideas explored in this report. Your belief in me has always exceeded my own.

To my son, Myles, thank you for reminding me every day that curiosity is one of the greatest gifts we can nurture. The phrase “Always question. Always wonder.” became more than encouragement; it became a philosophy that shaped both my teaching and this report.

I am grateful to the educators, school leaders, researchers, and professionals who engaged with my ideas throughout this journey. The thoughtful conversations that emerged through LinkedIn, professional learning communities, and everyday dialogue challenged my assumptions, sharpened my thinking, and strengthened this work. Your willingness to engage with these observations reminded me that meaningful educational improvement is a collaborative endeavor.

I also want to acknowledge the broader community of teachers who continue to show up for students every day. In classrooms across the country, educators quietly observe, encourage, adapt, and believe in young people—often without recognition. It is my hope that this report honors that daily work and contributes, in some small way, to the ongoing conversation about how we recognize learning.

Finally, I am grateful for the opportunity to spend my first year in the classroom at a turnaround middle school in Gary, Indiana. Every challenge, every lesson, every conversation, and every success contributed to my growth—not only as a teacher, but as a reflective practitioner. This report is a product of that journey.

If *Beyond the Achievement Gap* accomplishes anything, I hope it encourages educators to look a little more closely, celebrate progress a little earlier, and remember that every measurable achievement begins with a learner who first found the courage to begin.

Learning deserves to be noticed before it is measured.