2024-2025 Mathematics Achievement Fund (MAF) Coaching Program Evaluation Findings

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Overview

- MAF program overview
- How are coaches trained, supervised, and supported?
- How are coaches serving as instructional leaders?
- How is MAF coaching benefitting
  - Teachers?
  - Students?
  - Communities?
- Key Takeaways
- Next Steps

MAF Program Overview

MAF Math Coaching Model Overview

Math coaches receive intense professional learning in the following areas:

- The *Kentucky Academic Standards for Mathematics*
- Cognitive coaching
- Mathematics coaching
- Enrollment and completion of the elementary mathematics endorsement at the University of Louisville

MAF Math Coaching Model Overview

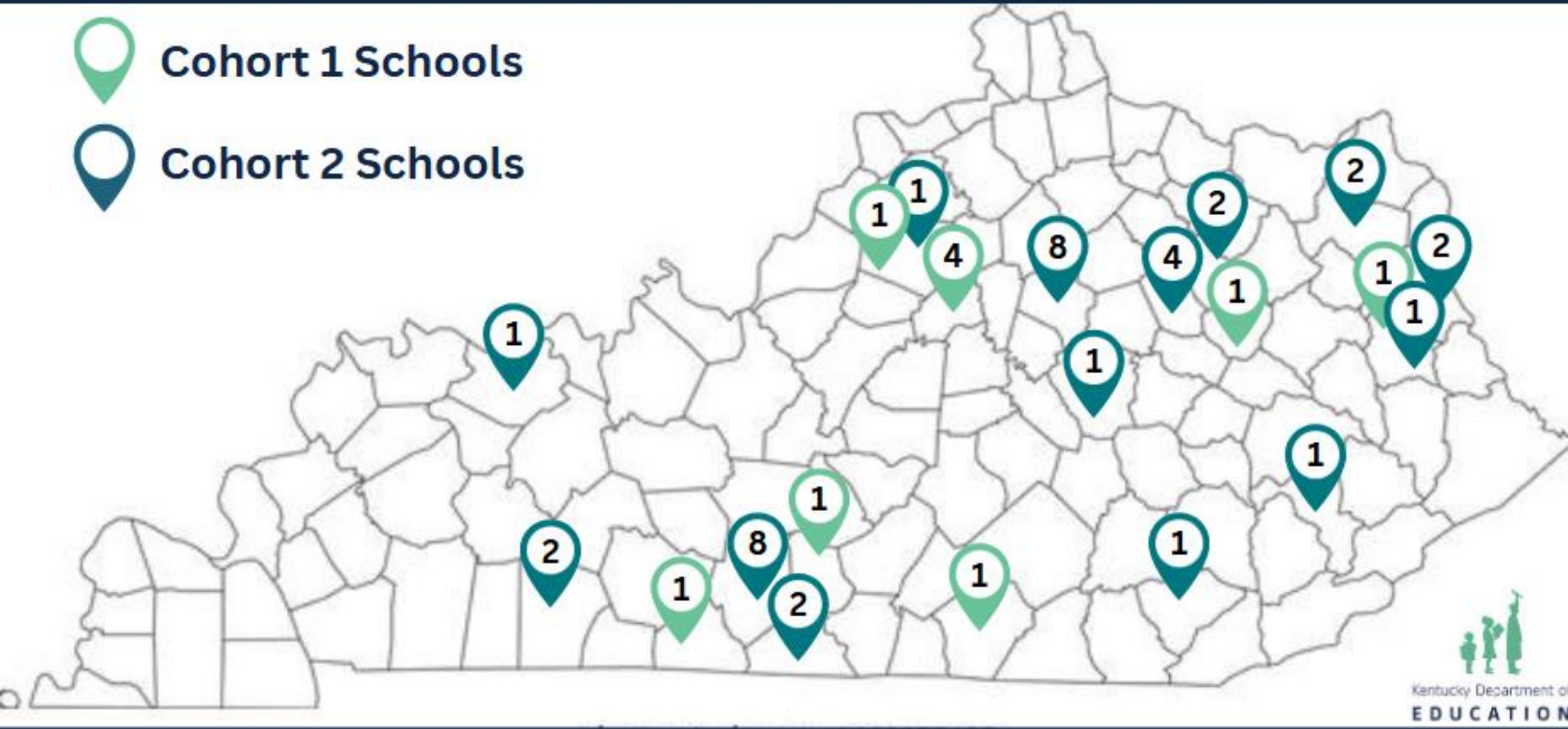
- Coach teachers in cycles of planning (at least 8 cycles per 50% of mathematics teachers) using cognitive coaching planning and reflecting conversations.
- Spend at least 50% of instructional day in classrooms to improve effective mathematics teaching practices (EMTPs; schools choose only two EMTPs to focus on) by working with teachers.
- Spend the remainder of the day in collaborative planning with their MAF Math Mentor, participating in/leading professional learning, serving on MTSS team, and family engagement.

MAF Annual Evaluation

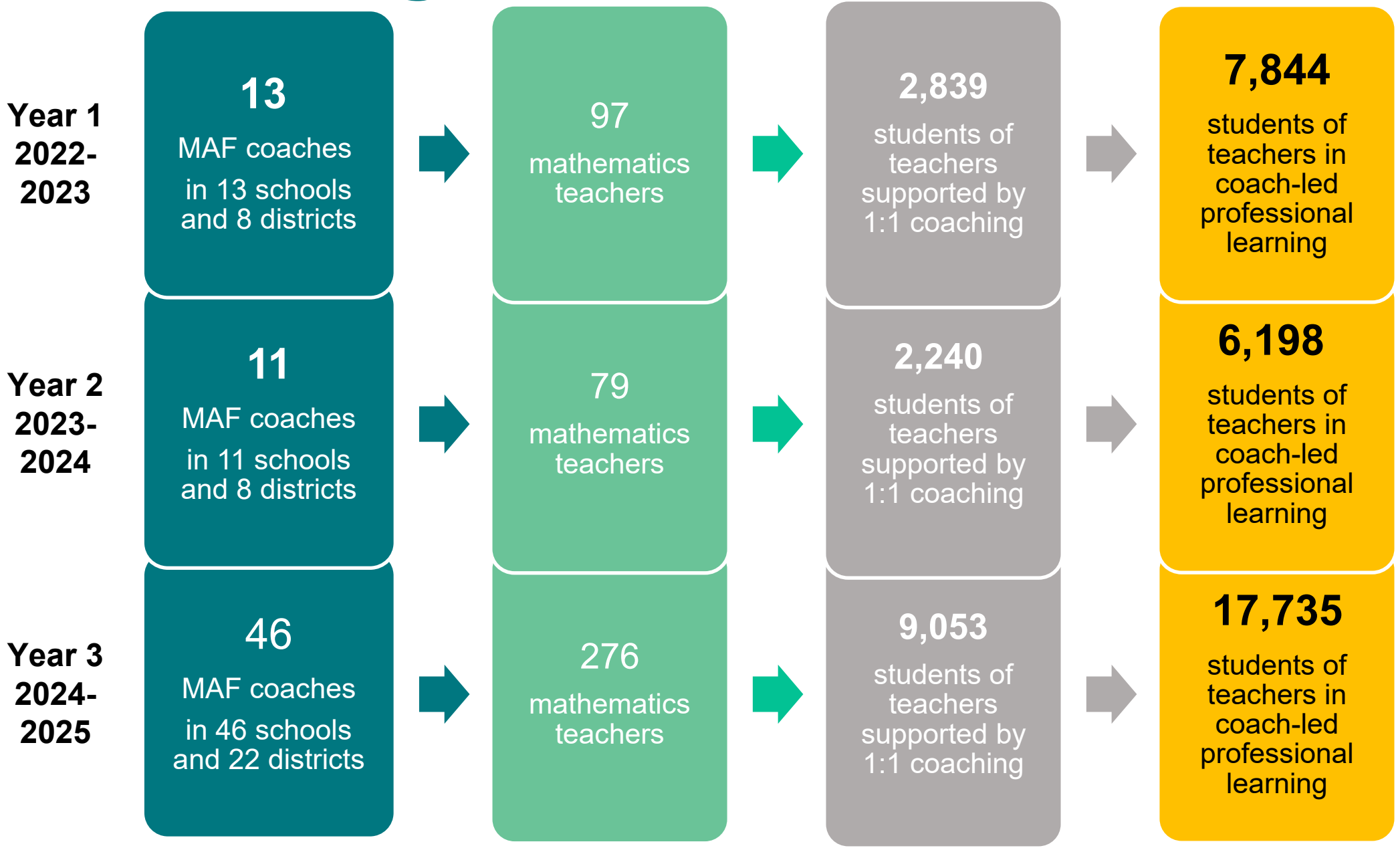
- Multifaceted, focusing on four levels of data: student, teacher, mathematics coach and schoolwide.

- Measured the quality of MAF coaching conversations to ensure common language and a shared understanding among MAF coaches, district personnel, regional consultants, MAF professional learning providers and KDE.

Mathematics Achievement Fund (2024-2025)



MAF Program Reach



Coach Training, Support, and Supervision

MAF Coach Professional Learning Progression – Year One

Cohort 1 – Year 1

School level mathematics coach shall engage in ongoing professional learning for the two-year renewable grant focused in four areas:

- Intensive PL on the *KAS for Mathematics* utilizing resources from www.kystandards.org
- Intensive PL in mathematics coaching
- Intensive PL in cognitive coaching
- Enrollment and completion of two graduate courses within the elementary mathematics endorsement
  - EDAP 546 Math Reasoning
  - EDAP 646 Teaching Number K-5

MAF Coach Professional Learning Progression – Year Two

Cohort 1 – Year 2

School level mathematics coach shall engage in ongoing professional learning for the two-year renewable grant focused in four areas:

- Intensive PL on the *KAS for Mathematics* utilizing resources from www.kystandards.org
- Intensive PL in mathematics coaching
- Intensive PL in cognitive coaching and adaptive schools
- Enrollment and completion of the elementary mathematics endorsement
  - EDAP 647 Teaching Geometry, Measurement and Data
  - EDAP 648 Teaching Fractions

MAF Coach Professional Learning Progression – Year Three

Cohort 1 – Year 3

School level mathematics coach shall engage in ongoing professional learning for the two-year renewable grant focused in four areas:

- Intensive PL on the *KAS for Mathematics* utilizing resources from www.kystandards.org
- Intensive PL in mathematics coaching
- Intensive PL in Cognitive Coaching
- Enrollment and completion of the elementary mathematics endorsement
- Two teacher leaders shall engage in ongoing professional learning for one year, focused on the following areas:
  - Intensive PL in Cognitive Coaching
  - Enrollment and completion of the Math Fact Fluency course

MAF Coach Professional Learning Progression – Year Three

Cohort 2 – Year One

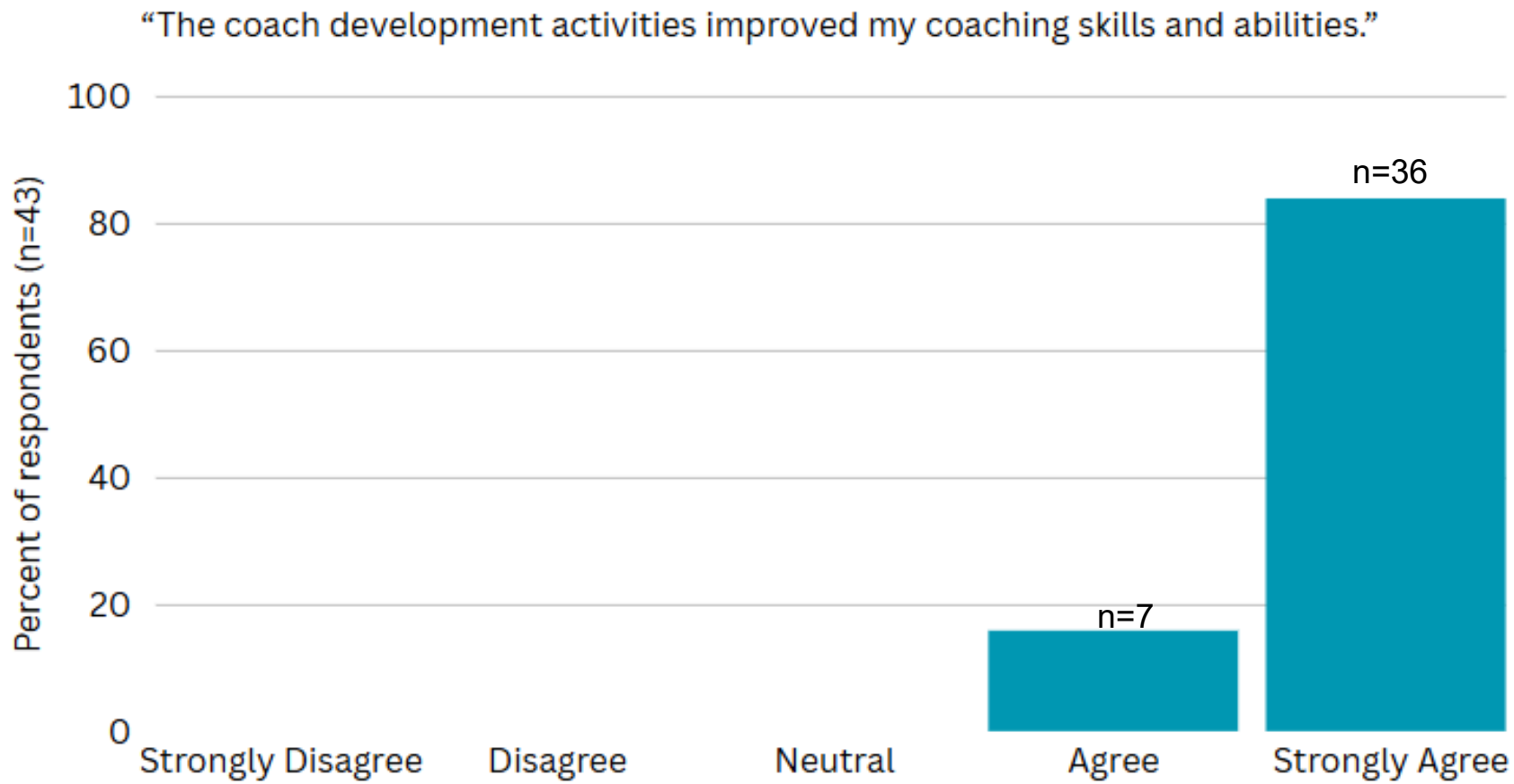
School level mathematics coach shall engage in ongoing professional learning for the two-year renewable grant focused in four areas:

- Intensive PL on the *KAS for Mathematics* utilizing resources from www.kystandards.org
- Intensive PL in mathematics coaching
- Intensive PL in cognitive coaching
- Enrollment and completion of two graduate courses within the elementary mathematics endorsement
  - EDAP 546 Math Reasoning
  - EDAP 646 Teaching Number K-5

Professional Learning Hours Completed

- 45 coaches completed 5,177.5 hours
- Hours completed ranged from 76 - 149
- On average, coaches completed 107.75

Most coaches strongly agreed that their training had improved their coaching skill



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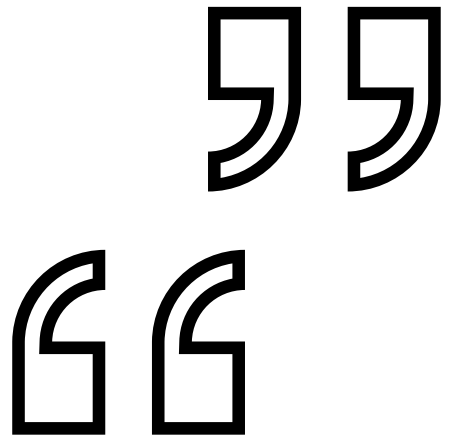
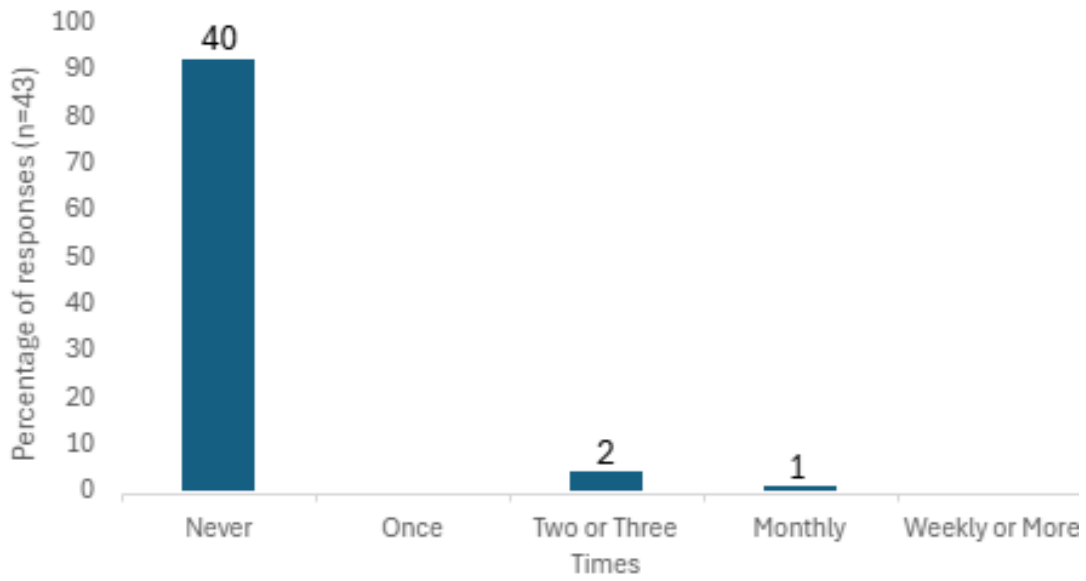
Let’s hear from the coaches

- “Cognitive coaching is an area where I have experienced growth. Being able to transition from a consulting approach to an approach built on data and questioning has made a difference toward helping teachers come to their own realizations about how to modify their teaching in a way that helps learners build capacity for reasoning and deeper thinking.”
- “My math content knowledge has strengthened as I've learned to recognize and support the implementation of SMPs and EMTPs in lesson planning and instruction, particularly in establishing a goal for learning and facilitating mathematical discourse.”

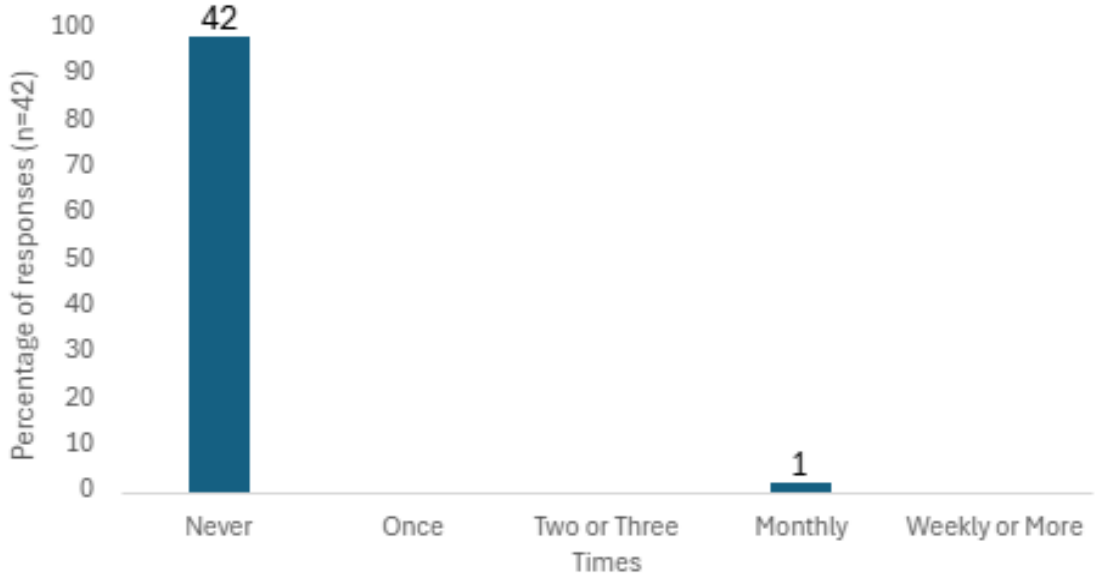


Most coaches reported that their time is largely protected for coaching

"In your role as a math coach, were you ever asked to serve as a **substitute or classroom teacher**?"



"In your role as a math coach, how often were you asked to **evaluate** classroom teachers?"



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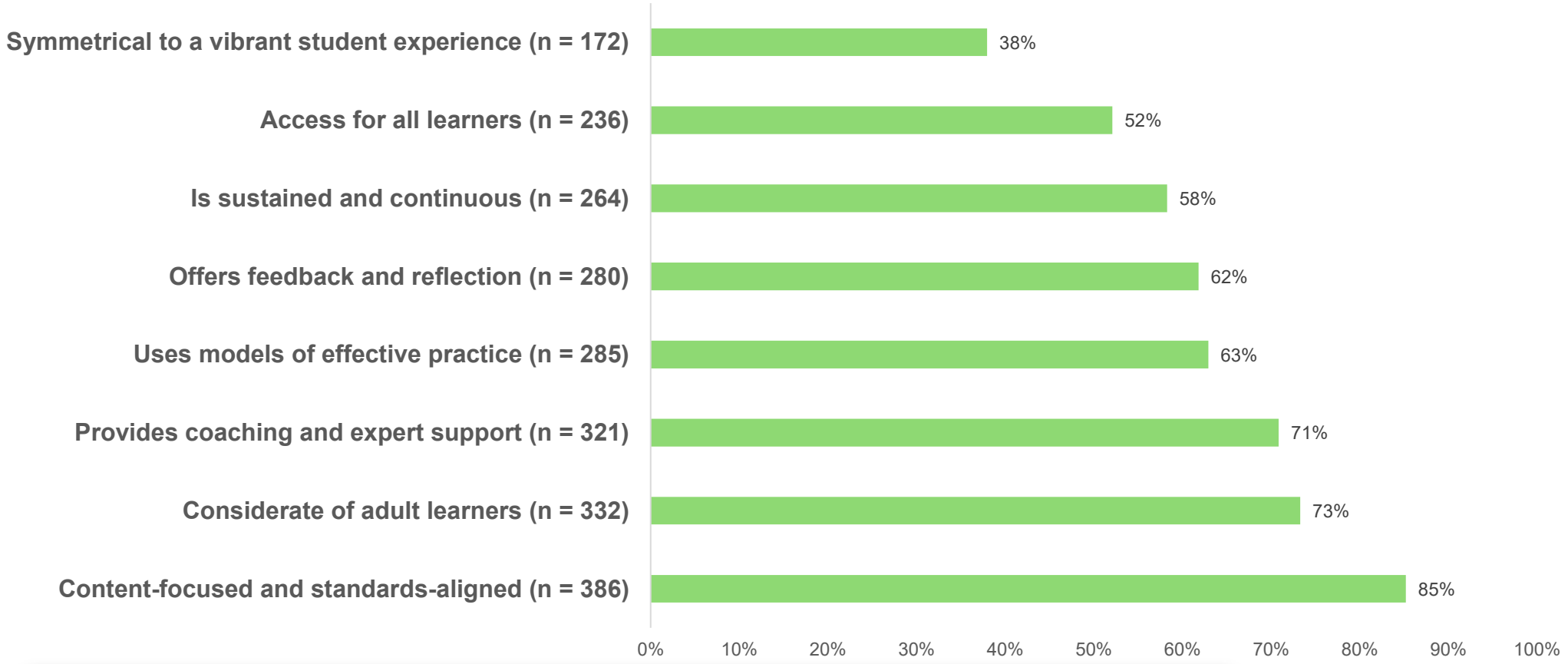
Coaches as Instructional Leaders

Coaches co-developed and implemented high-quality professional learning that included these characteristics

- Content-focused and standards-aligned
- Promotes access for all learners
- Considerate of adult learners
- Symmetrical to a vibrant student experience
- Uses models of effective practice
- Provides coaching and expert support
- Offers feedback and reflection
- Is sustained and continuous

Coaches co-developed and implemented high-quality professional learning that included these characteristics

(n = 453)



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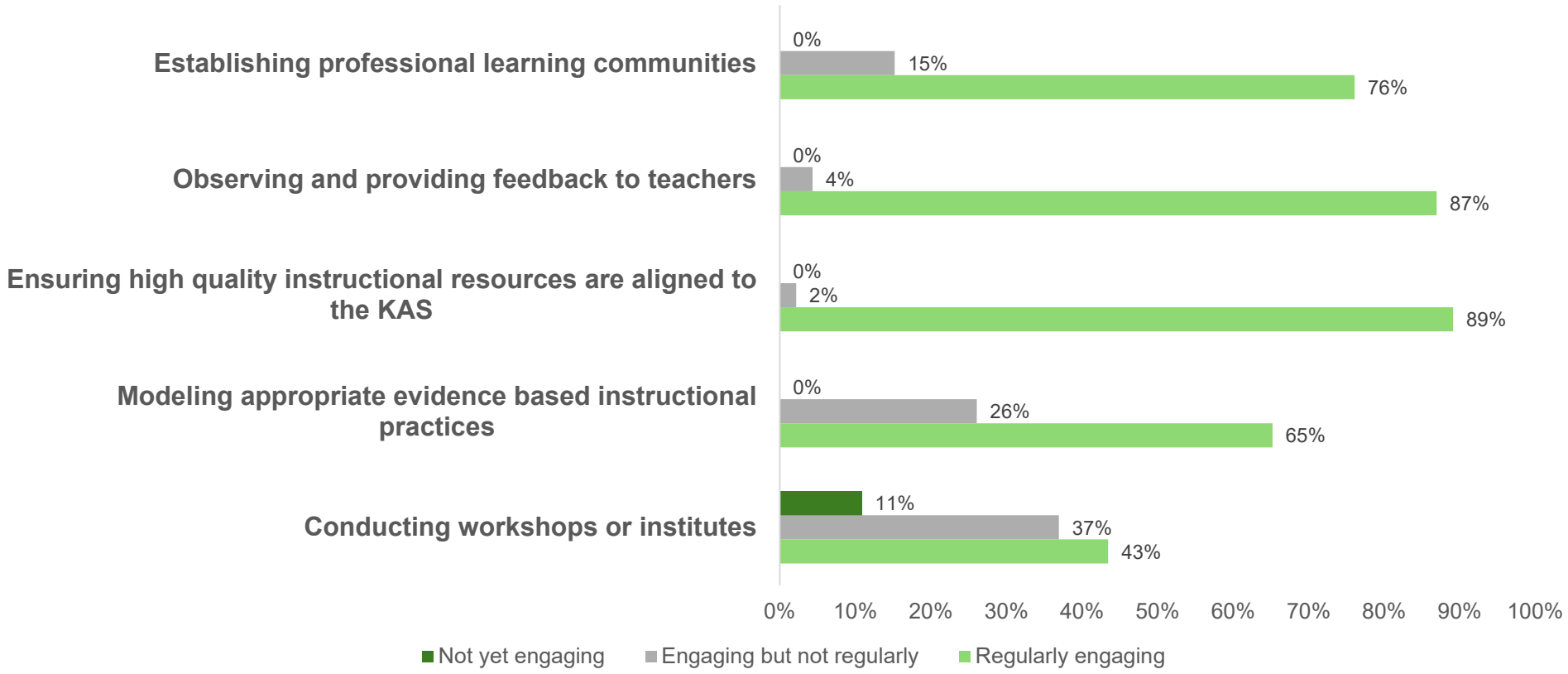
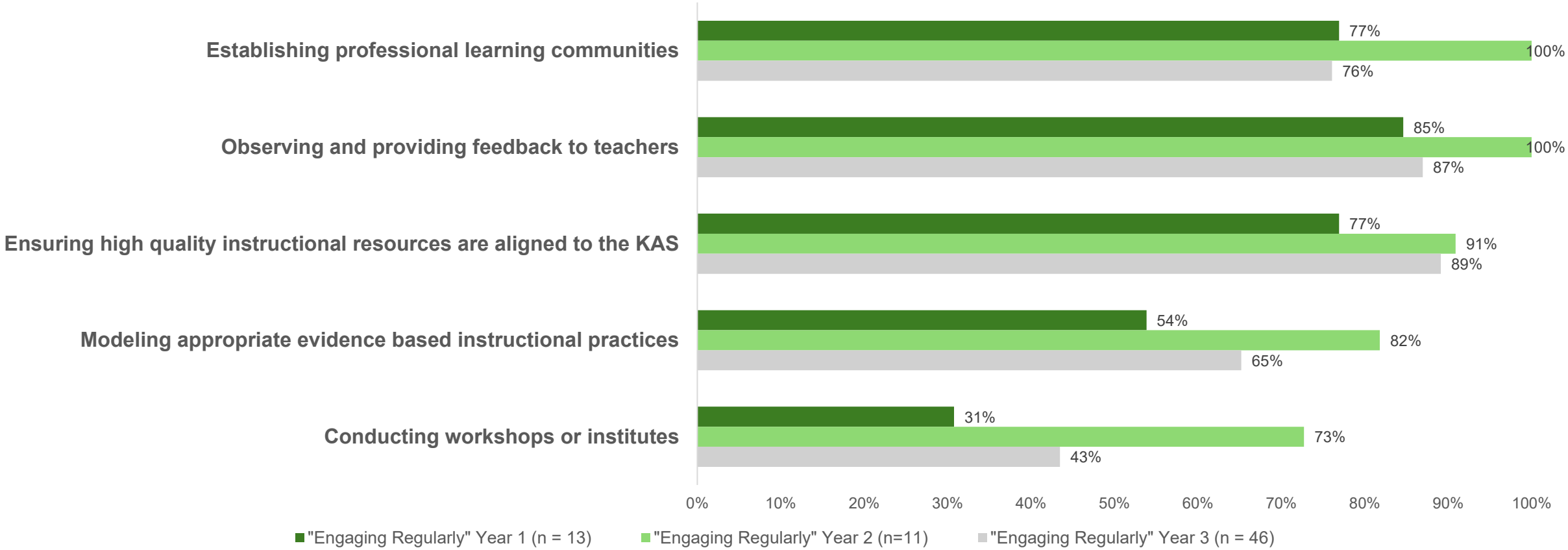
Coaches are serving as instructional leaders

Percent of Responses (n = 46)



Coaches reported engaging in instructional leadership more regularly over the 3 years of the grant



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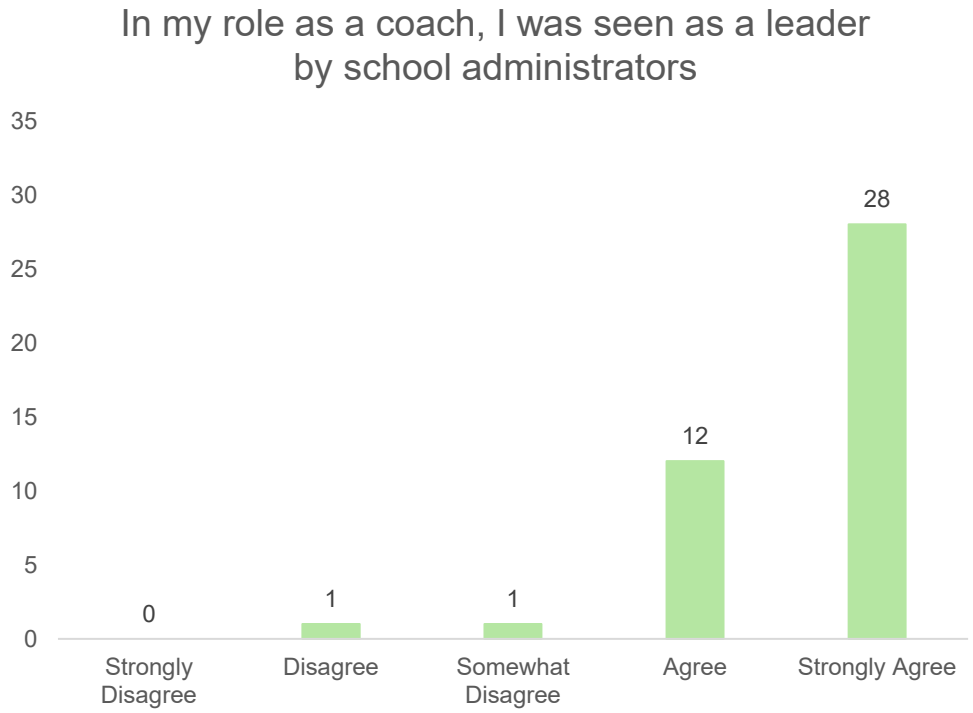
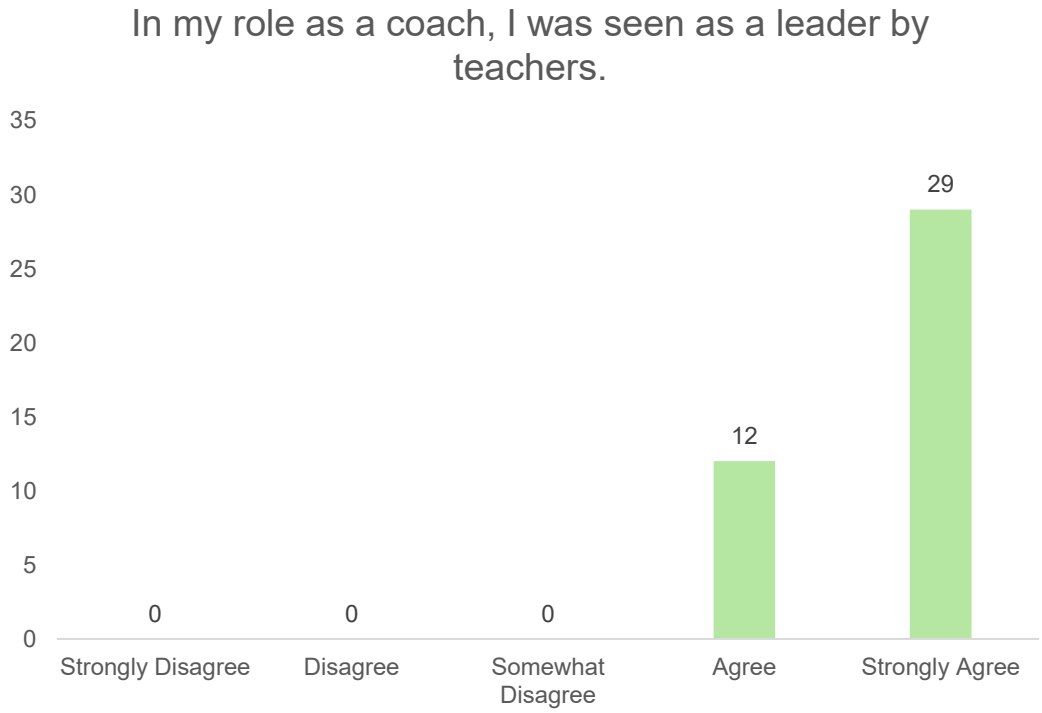
Most coaches report being seen as leaders by administrators and teachers





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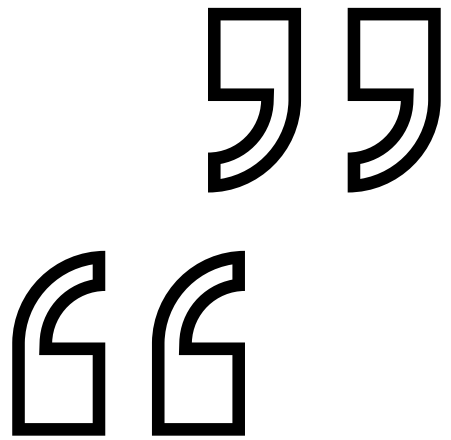
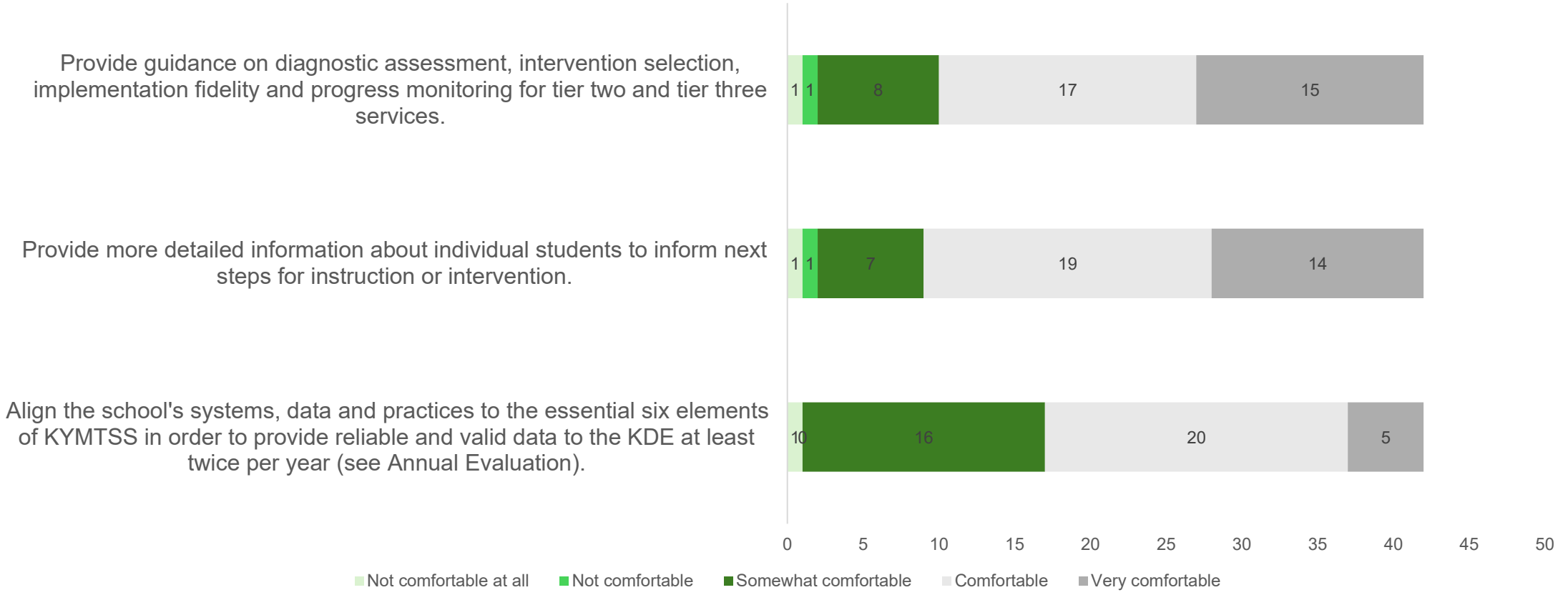
Let’s hear it from the coaches

- “I oversee our school's universal screener and diagnostic program for the school, whereas this used to be done by the guidance counselor. I am also asked to give my professional input on decisions involving MTSS in mathematics. In addition, I represent our school in district level meetings that involve elementary mathematics decisions, along with our principal.”
- “Teachers respected my role and valued my expertise as a math leader in the building. They often asked for my advice and help when planning math and looking at standards.”



Most coaches are comfortable supporting KY MTSS in their schools



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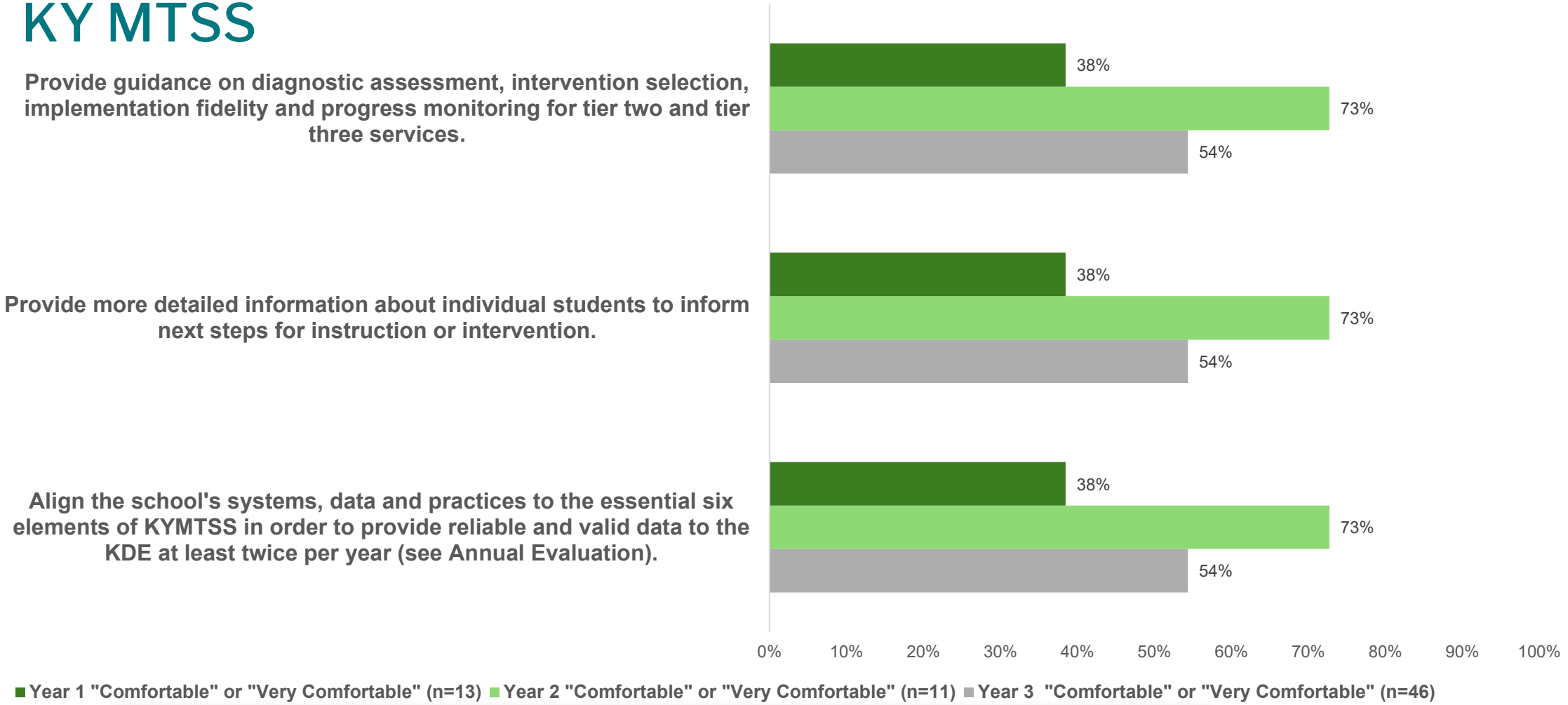
Coaches' comfortability varies over aspects of supporting KY MTSS



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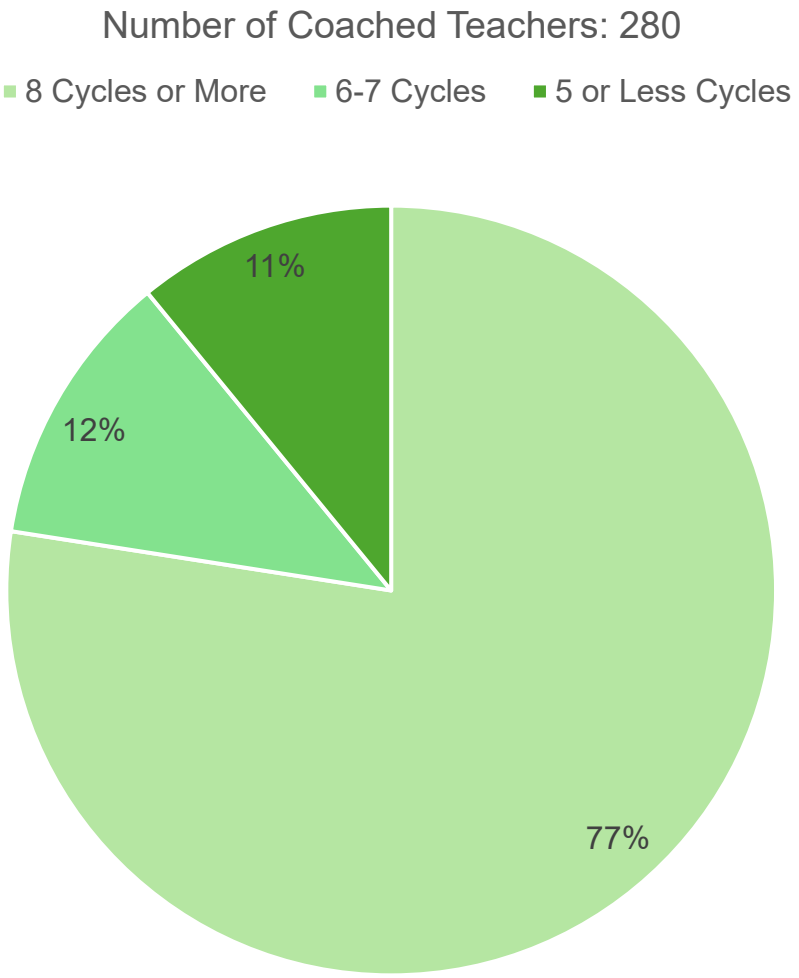
2024-2025 Teachers Completing Coaching Cycles



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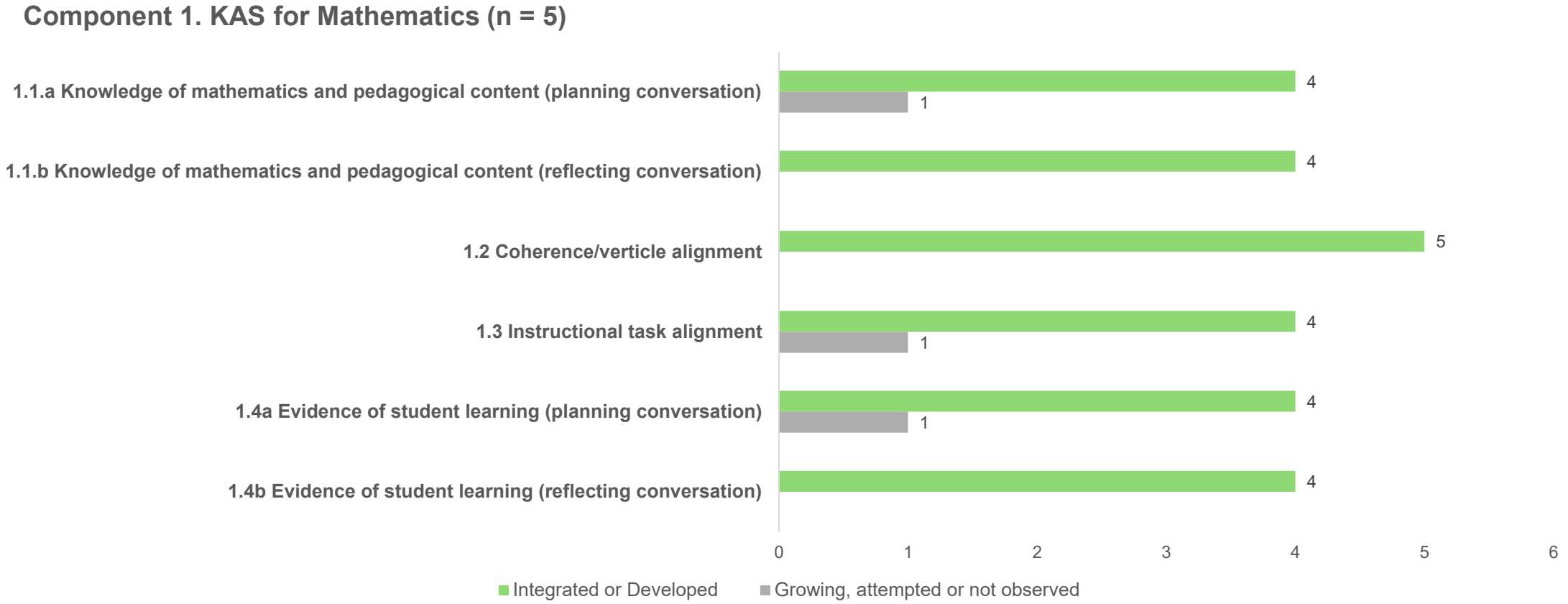
Coaches are aligning coaching conversations with the KAS for mathematics



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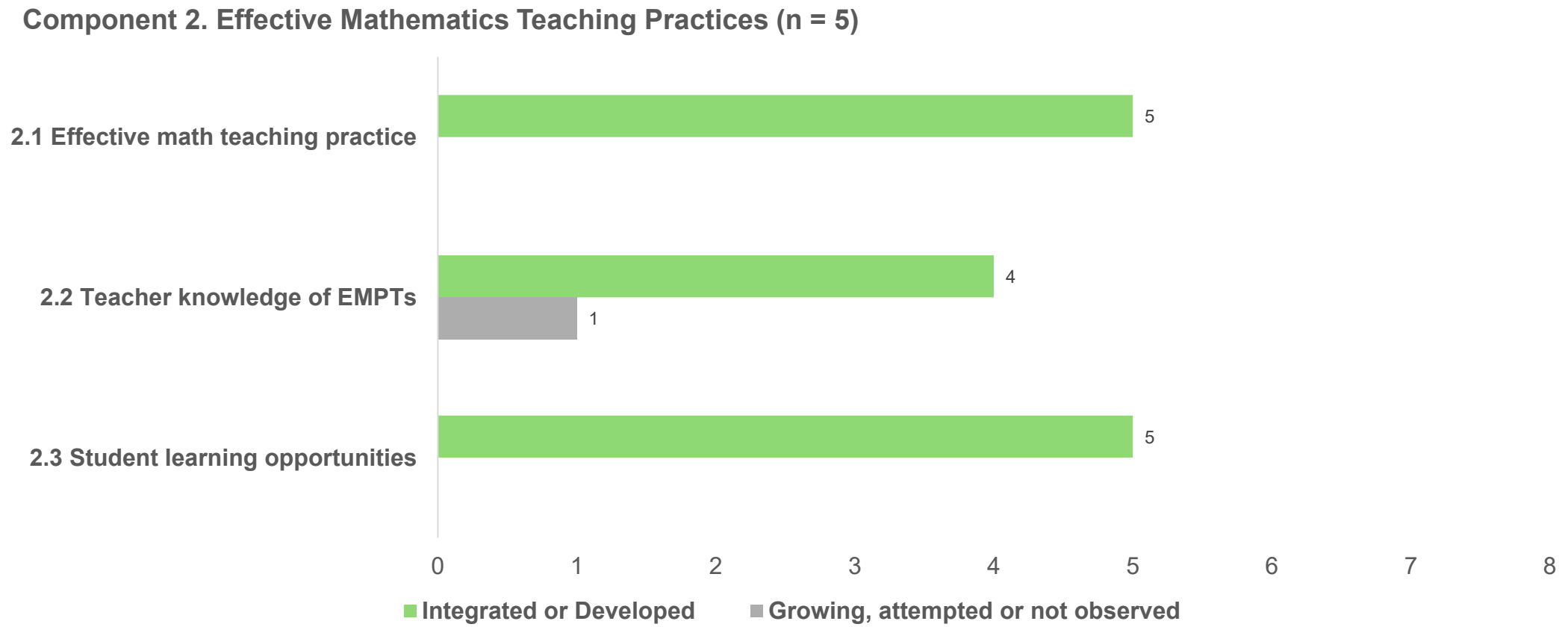
Coaching conversations are aligned to schools' focal EMTPs



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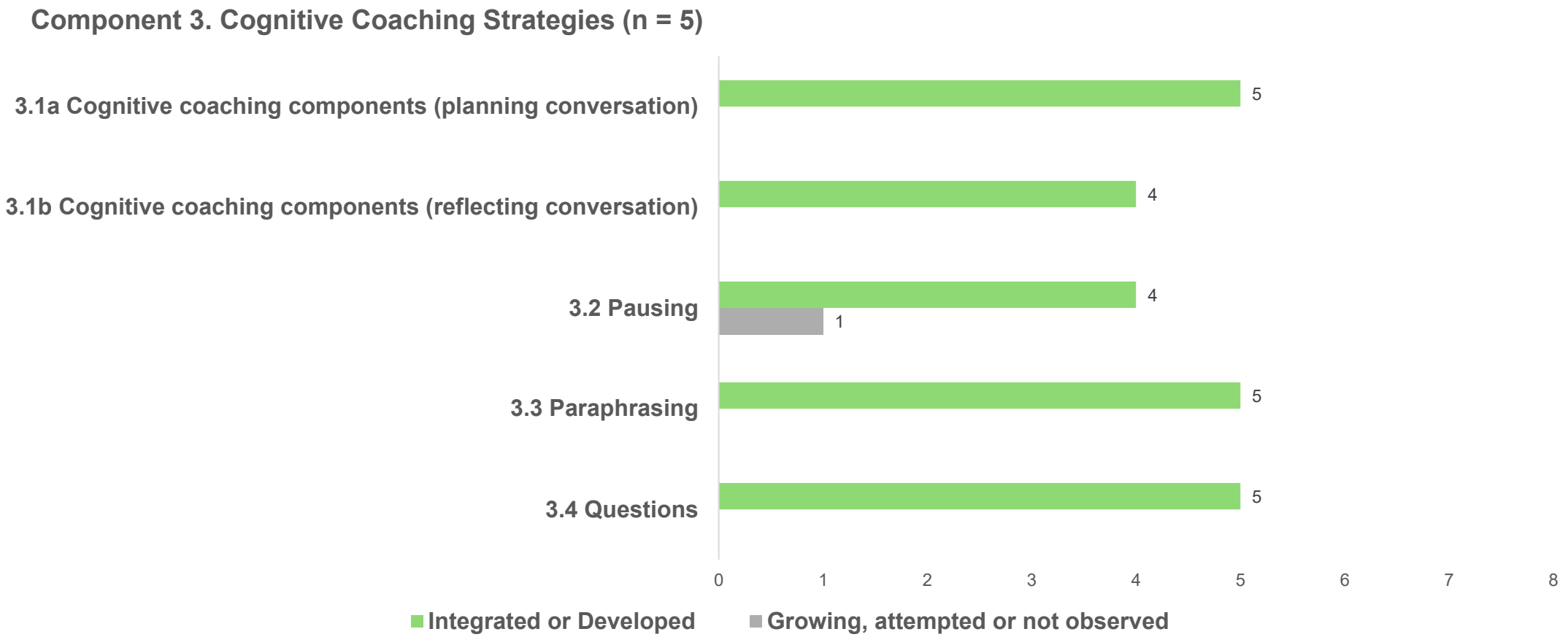
Coaches consistently use cognitive coaching strategies



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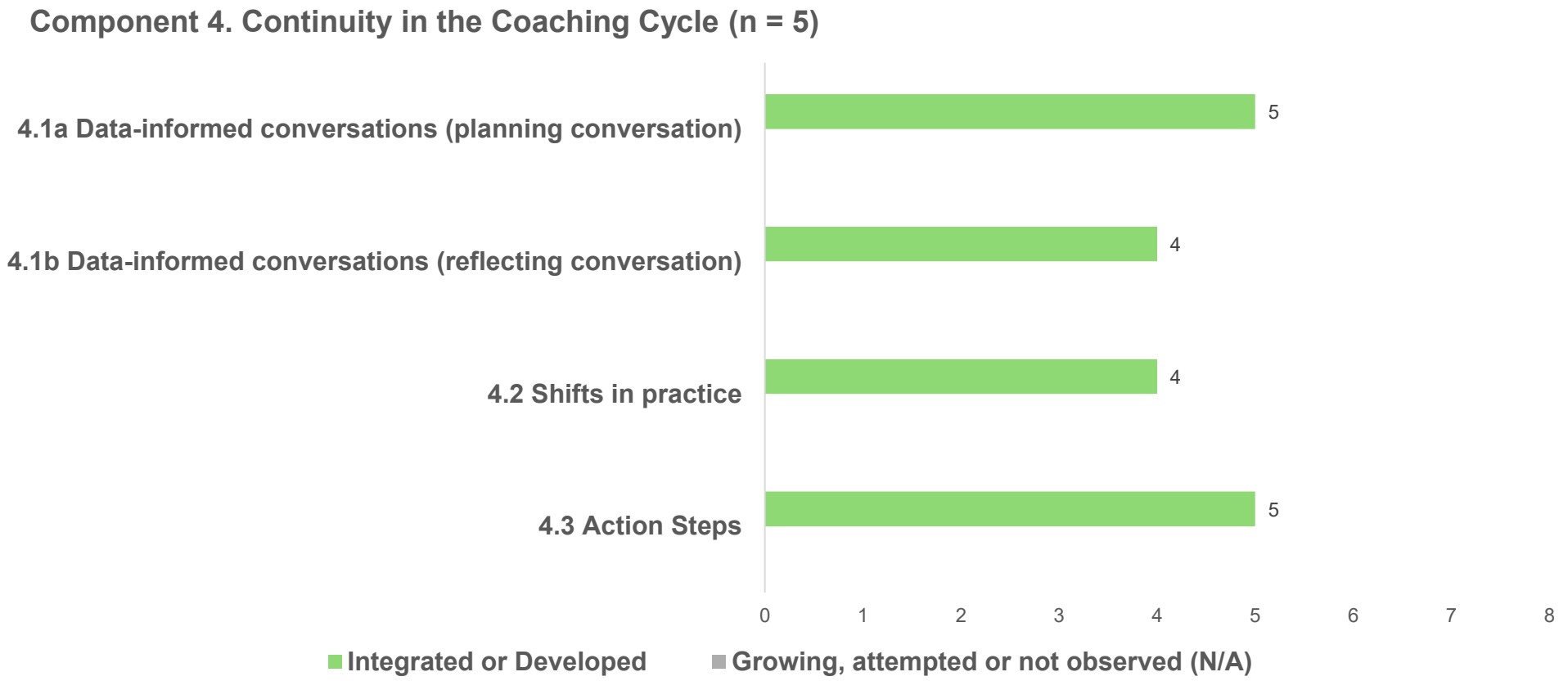
Coaching conversations consistently support continuous coaching cycles



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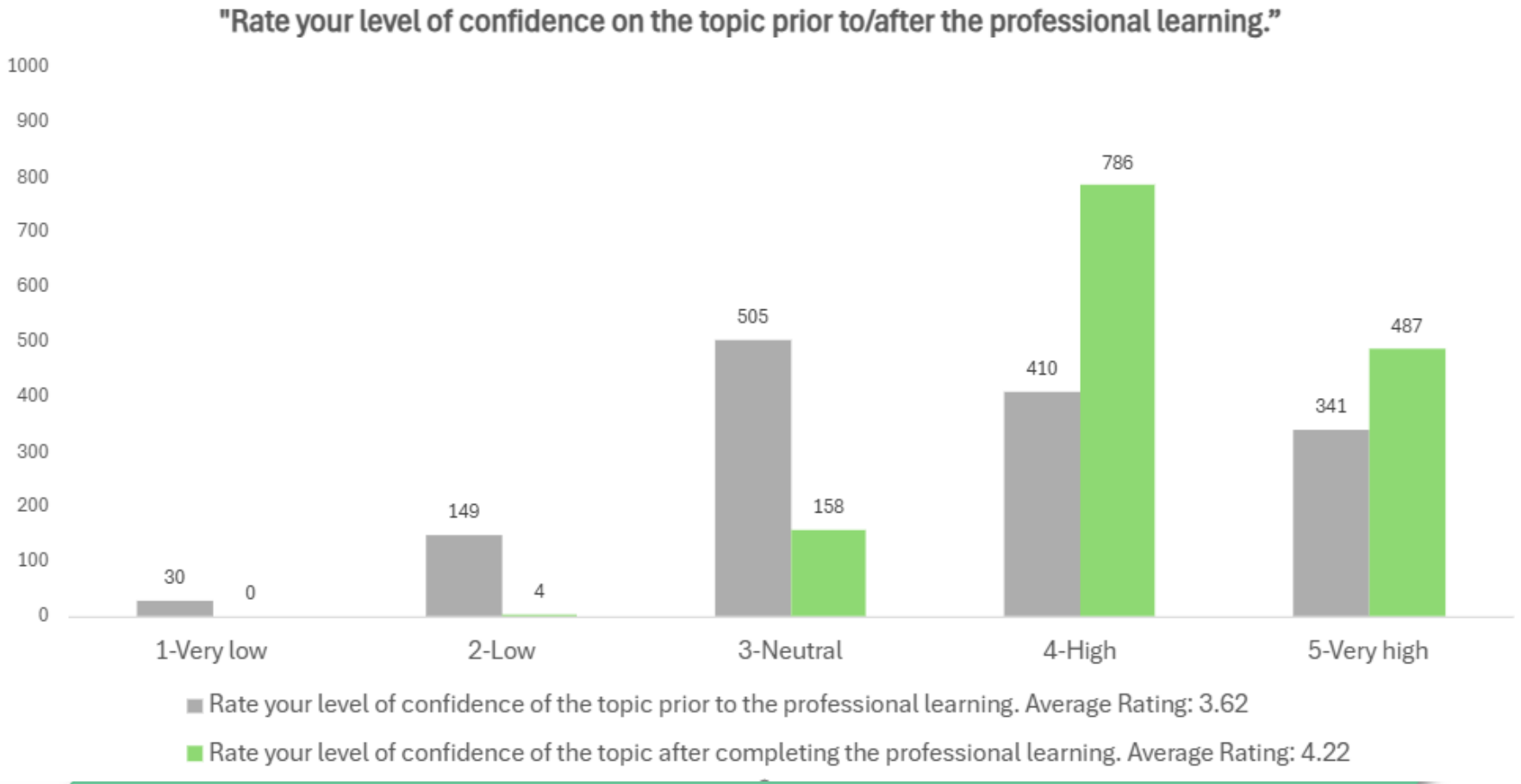
How Coaching Benefits Teachers

Teachers reported increased confidence after professional learning



Percent shift in the number of participants that selected 4 or 5 before versus after professional learning: +36%

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Teachers reported being very likely to implement professional learning

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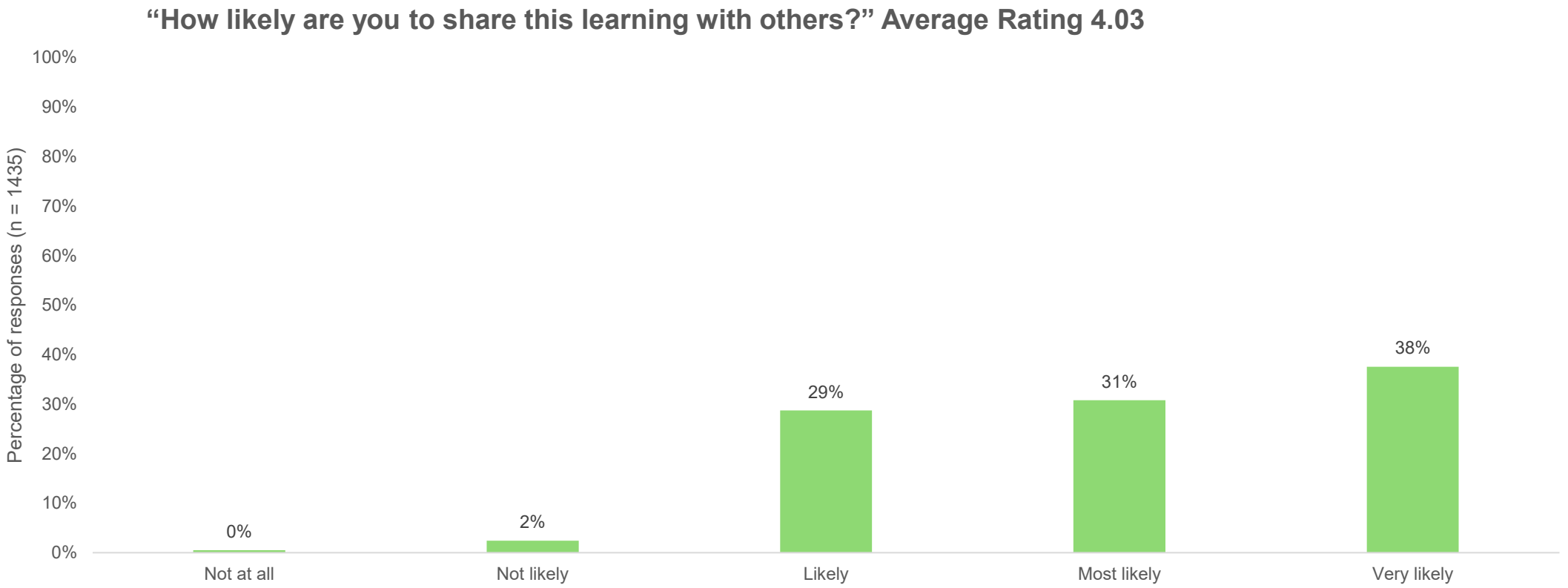
Teachers reported being likely to share their learning with others



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Coached teachers improved their classroom practice

89% of coached teachers grew at least one level on at least one EMTP

73% grew on both EMTPs

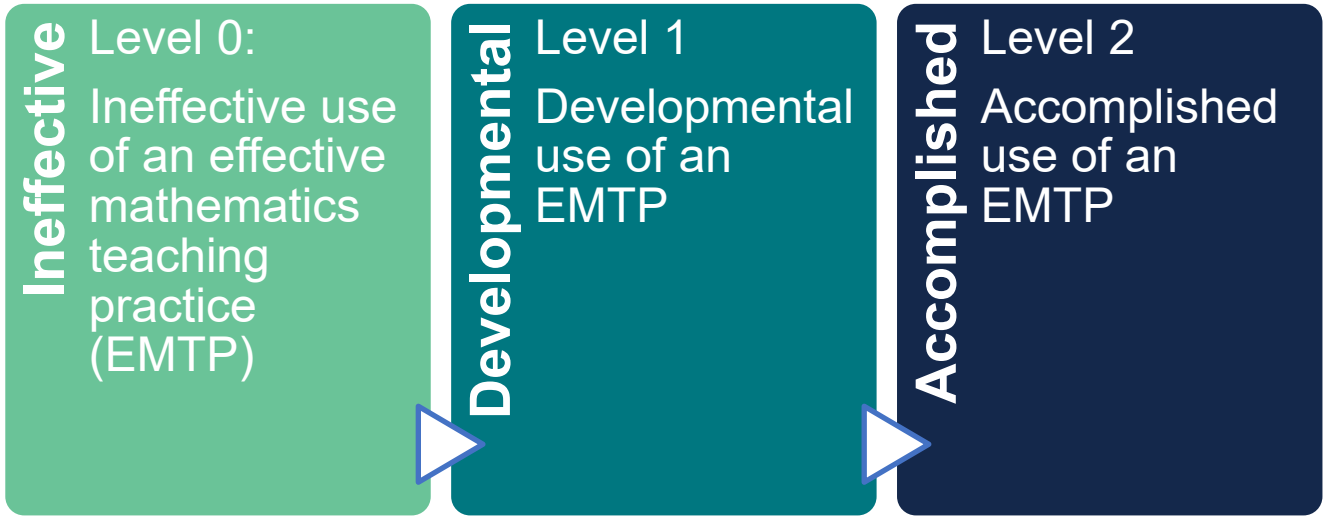
93% of coached teachers achieved a rating of “Developmental” or higher on at least one EMTP

86% of coached teachers achieved a rating of "Developmental" or higher on both EMTPs

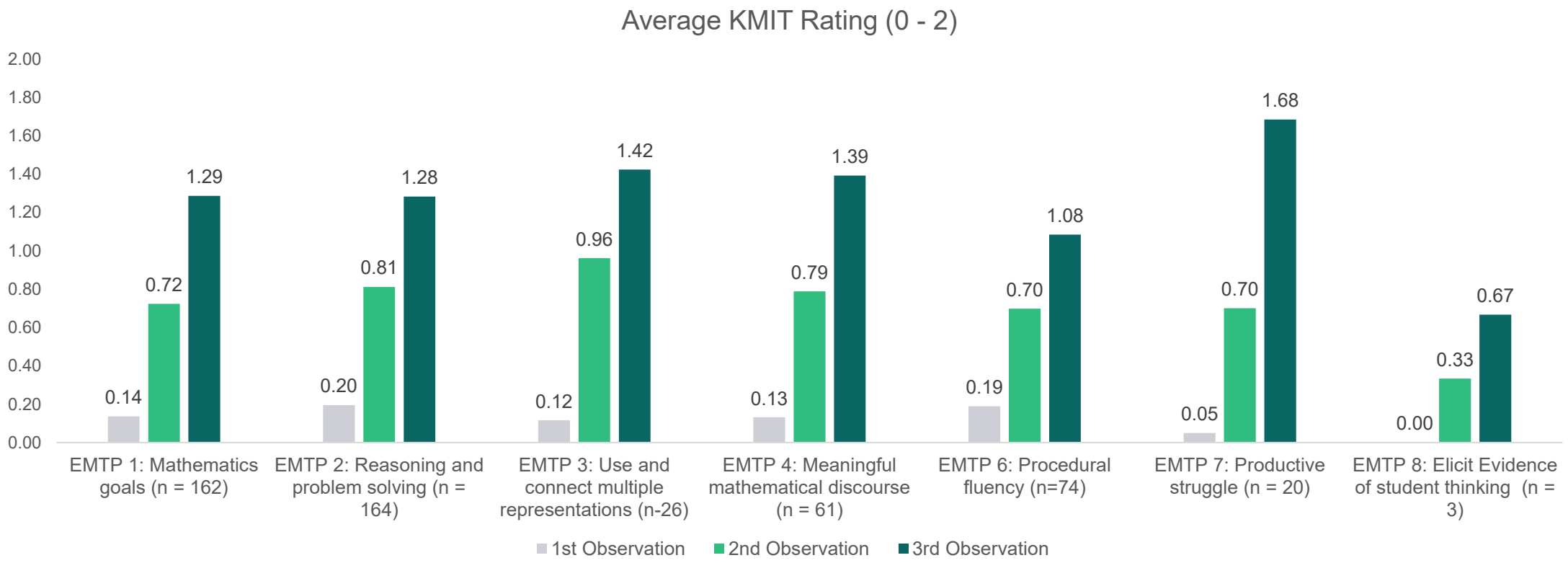
55% of coached teachers achieved a rating of “Accomplished” on at least one EMTP

23% were “Accomplished” on both EMTPs

Kentucky Mathematics Innovation Tool (KMIT)



On average, teacher practice improved substantially on all targeted EMTPs



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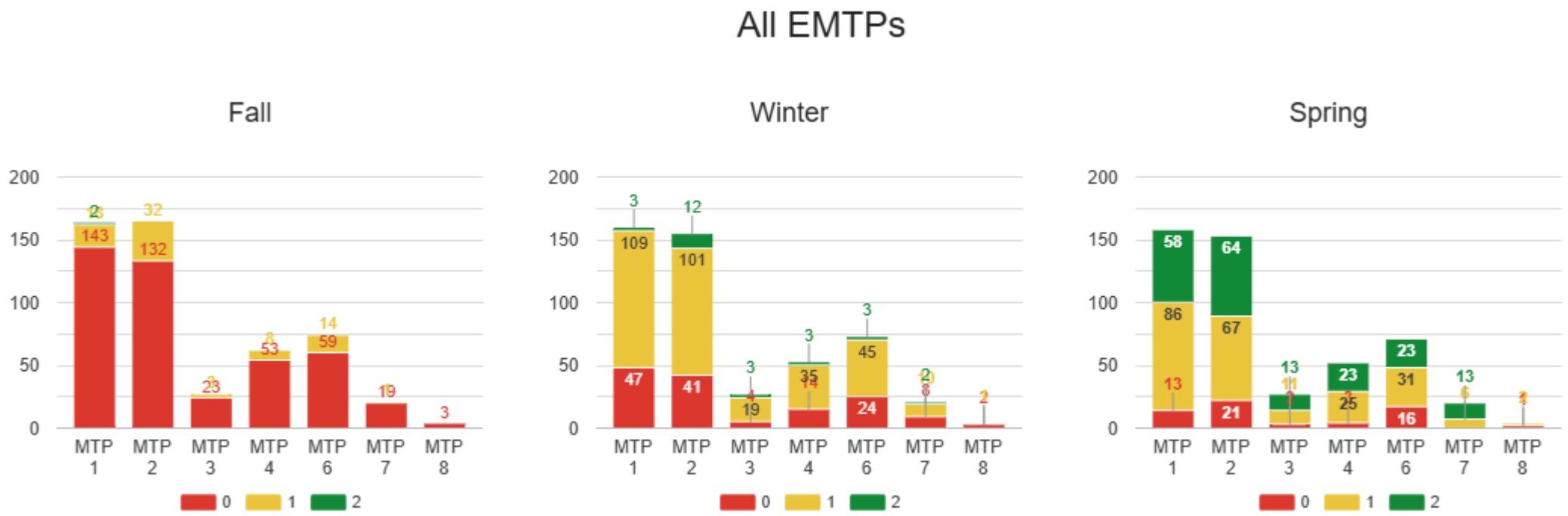
On average, teacher practice improved substantially on all targeted EMTPs 2024-2025



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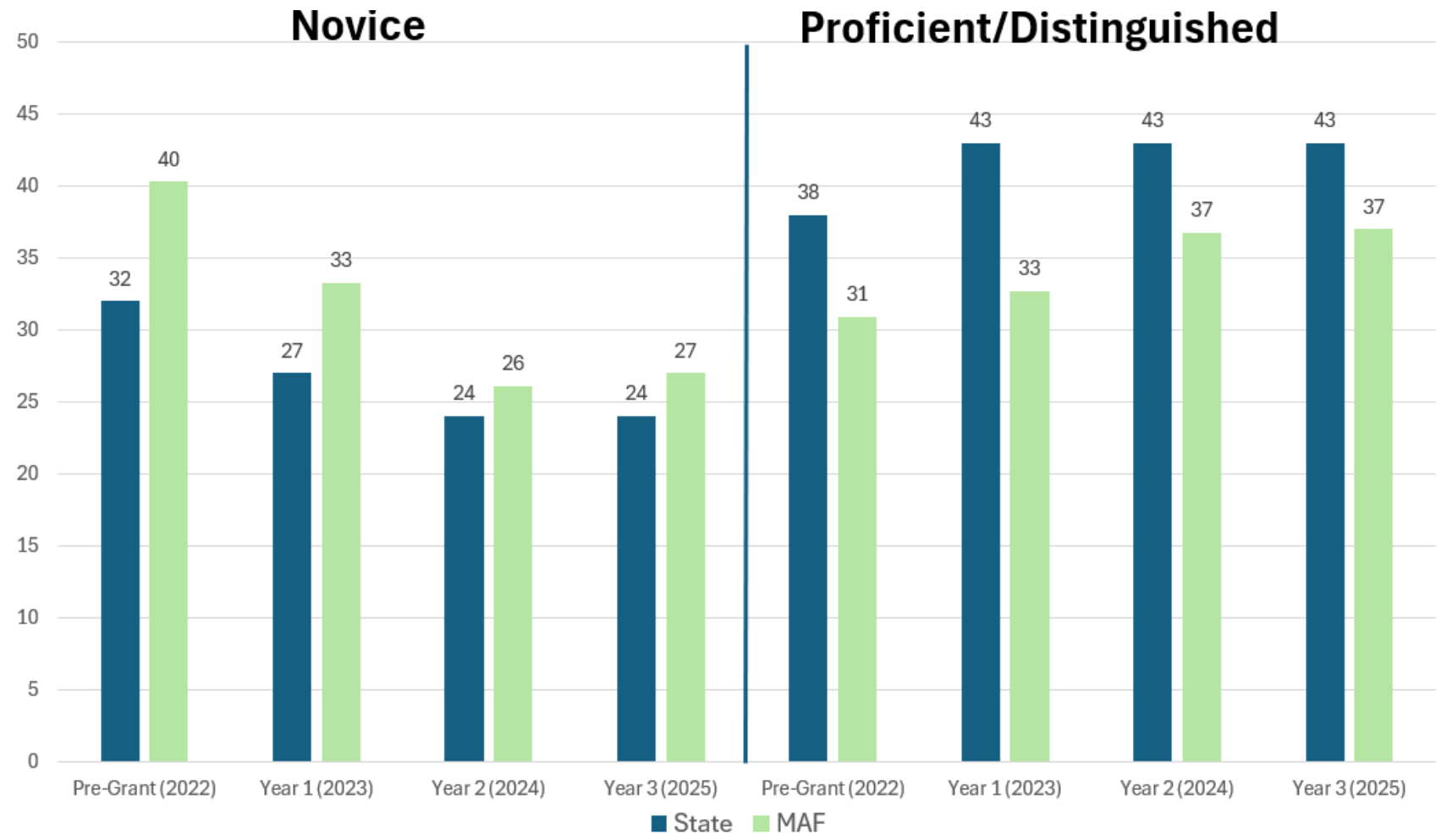
How Coaching Benefits Students and Communities

- The next few slides review the novice and proficient levels on the Kentucky Summative Assessment (KSA) over the lifetime of the MAF grants.
- A decrease in novice and an increase in proficient/distinguished shows scores are improving.

Cohort 1 KSA Mathematics Scores MAF Schools Average Compared to State – Grade 3



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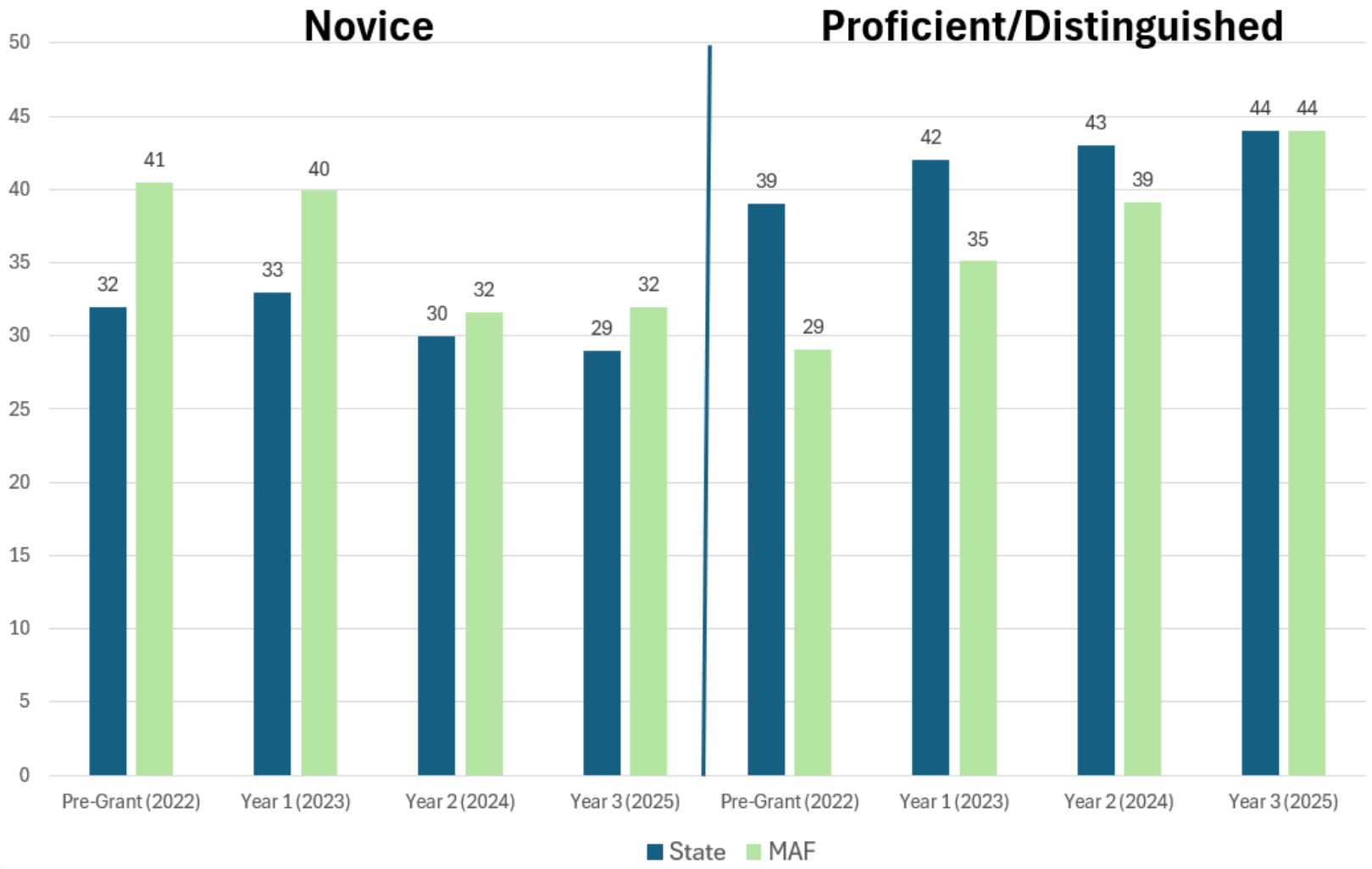
Cohort 1 KSA Mathematics Scores MAF Schools Average Compared to State – Grade 4



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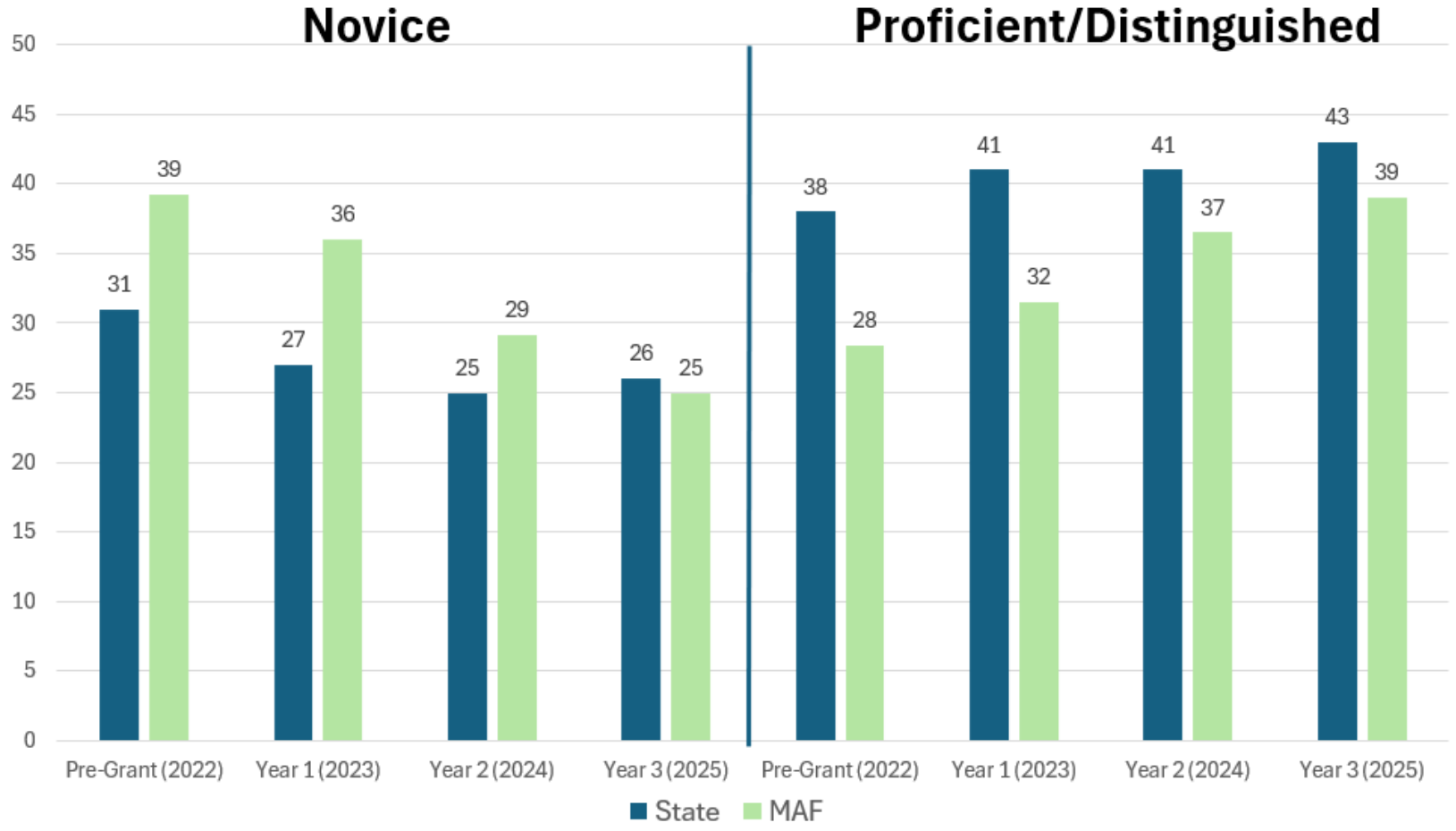
Cohort 1 KSA Mathematics Scores MAF Schools Average Compared to State – Grade 5



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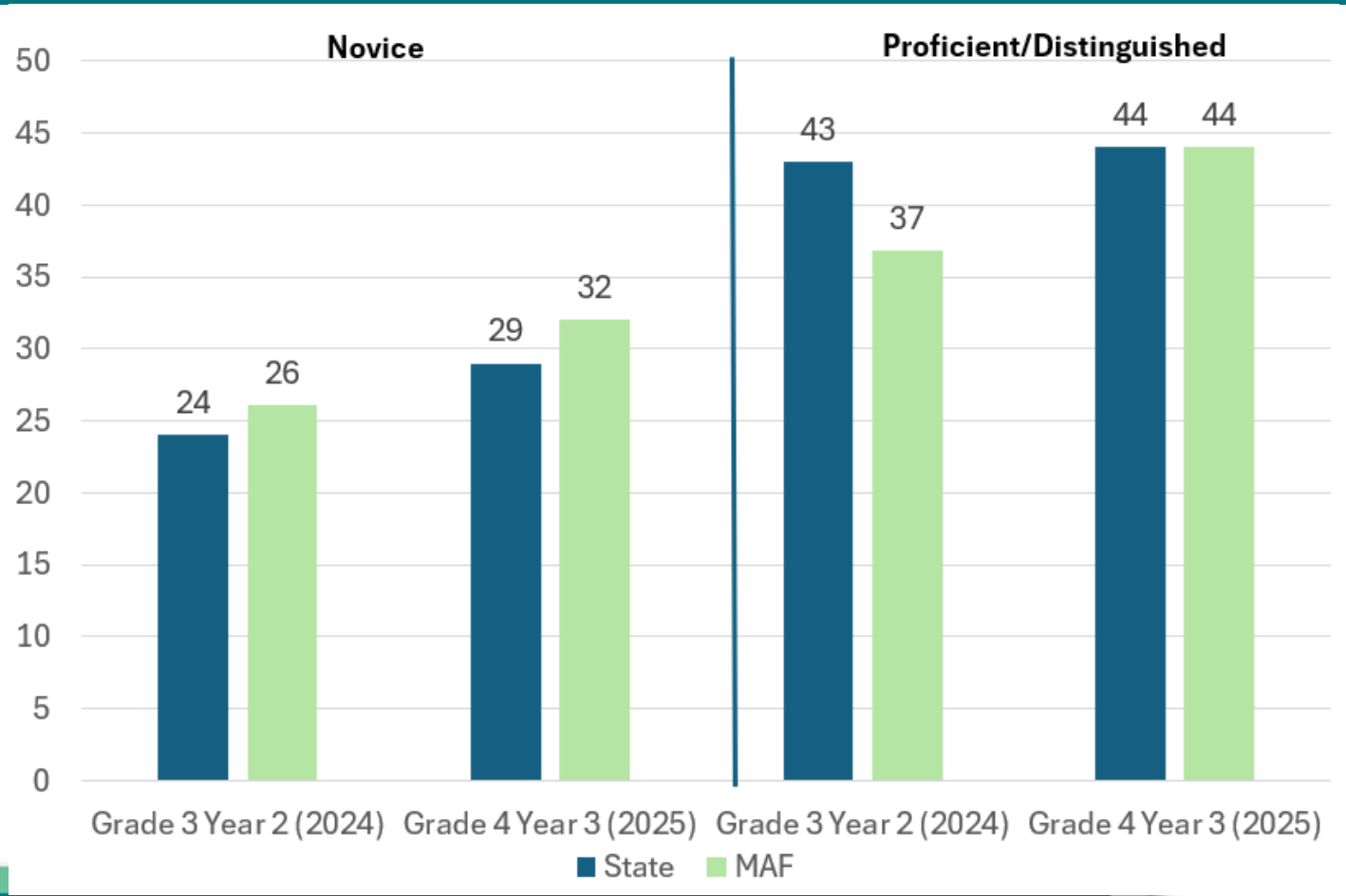
Cohort 1 KSA Mathematic Trends



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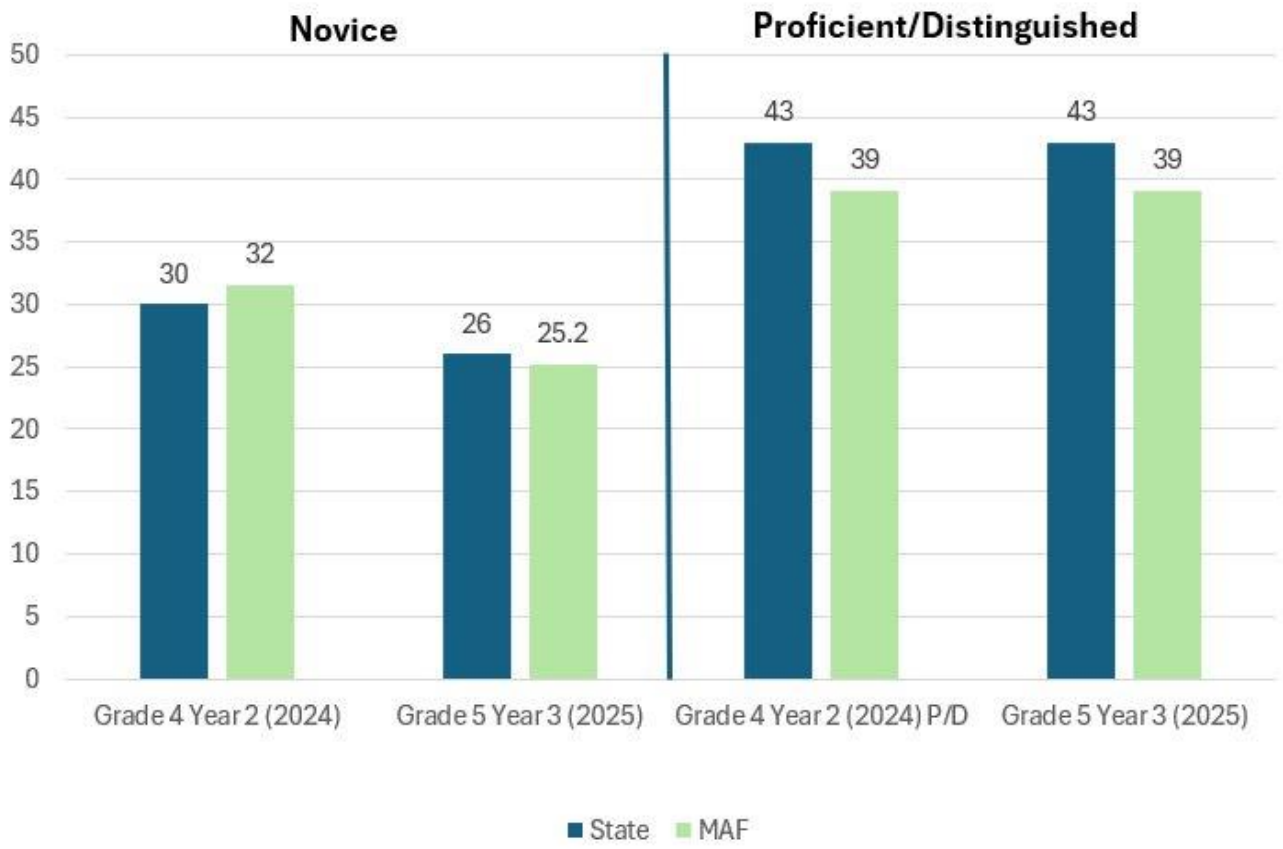
Cohort 1 KSA Mathematic Trends



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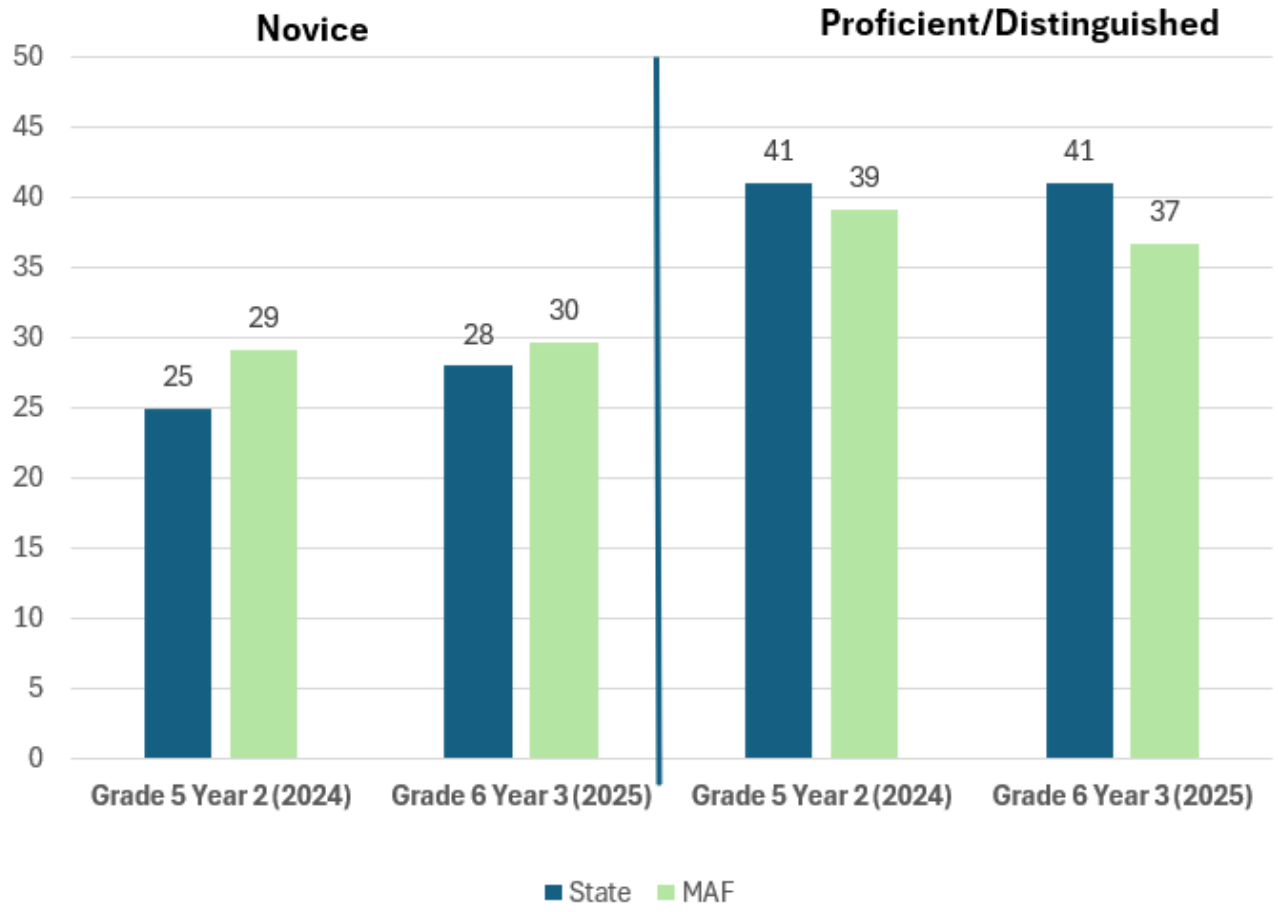
Cohort 1 KSA Mathematic Trends



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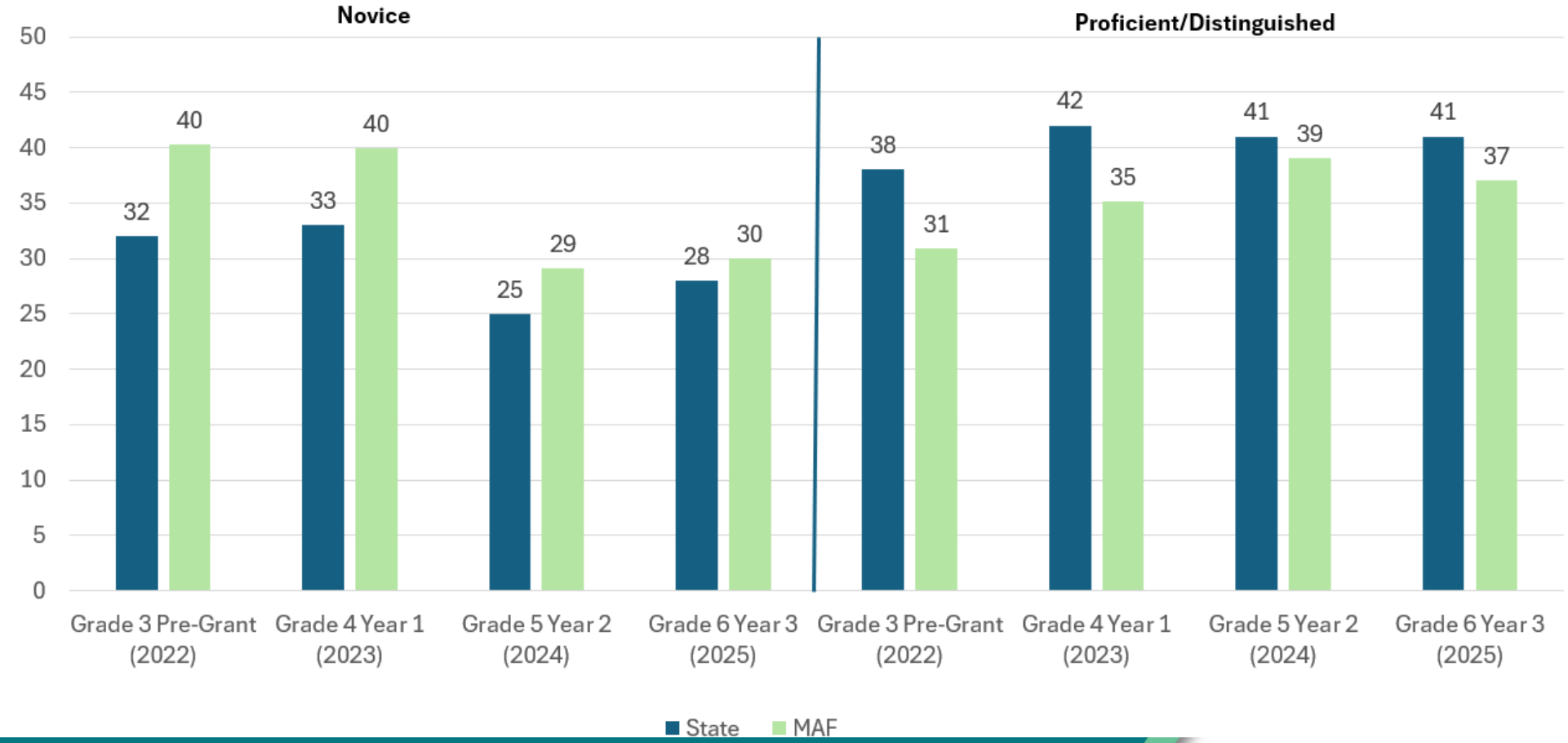
Cohort 1 KSA Mathematic Trends



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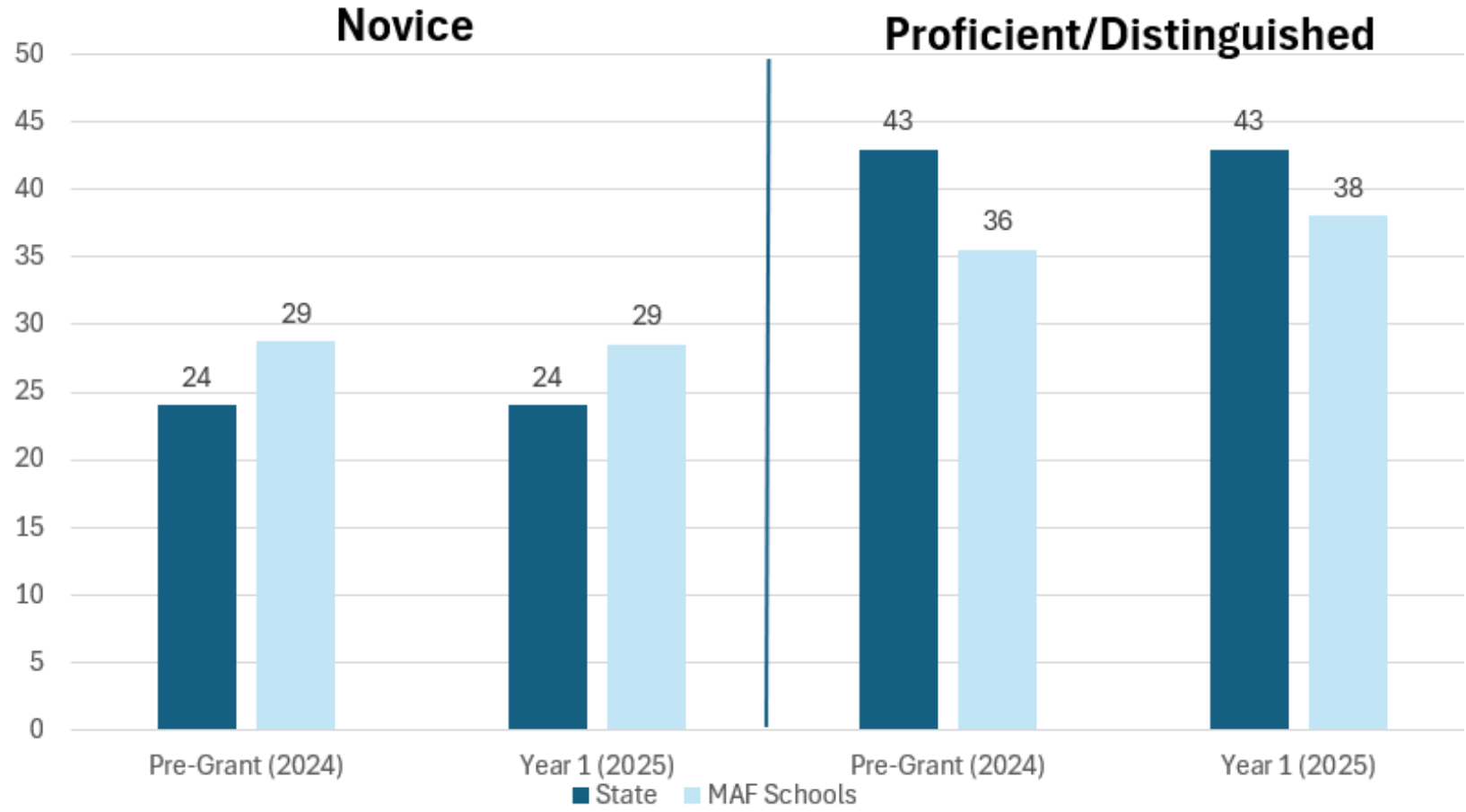
Cohort 2 KSA Mathematics Scores MAF Schools Average Compared to State – Grade 3



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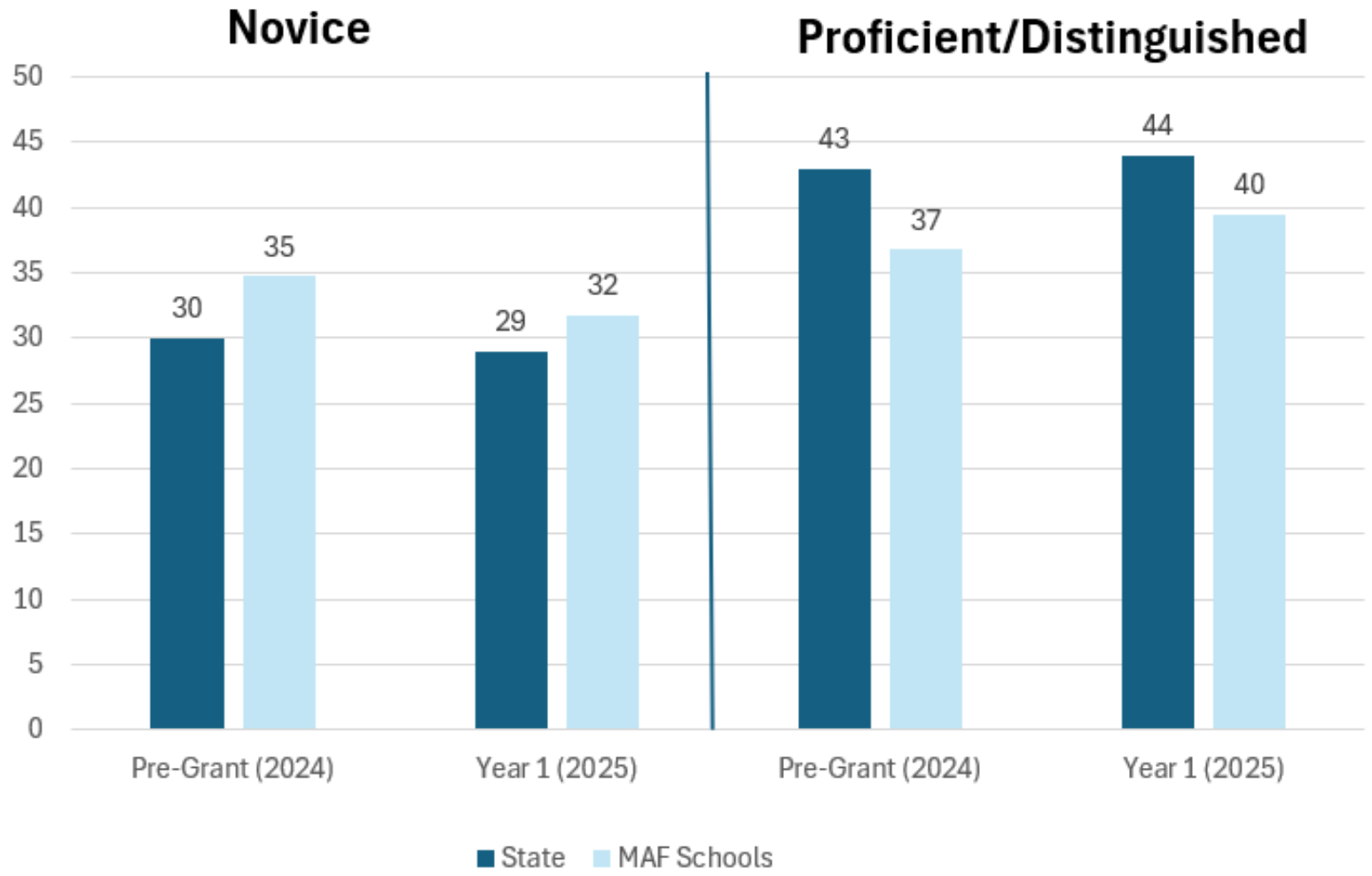
Cohort 2 KSA Mathematics Scores MAF Schools Average Compared to State – Grade 4



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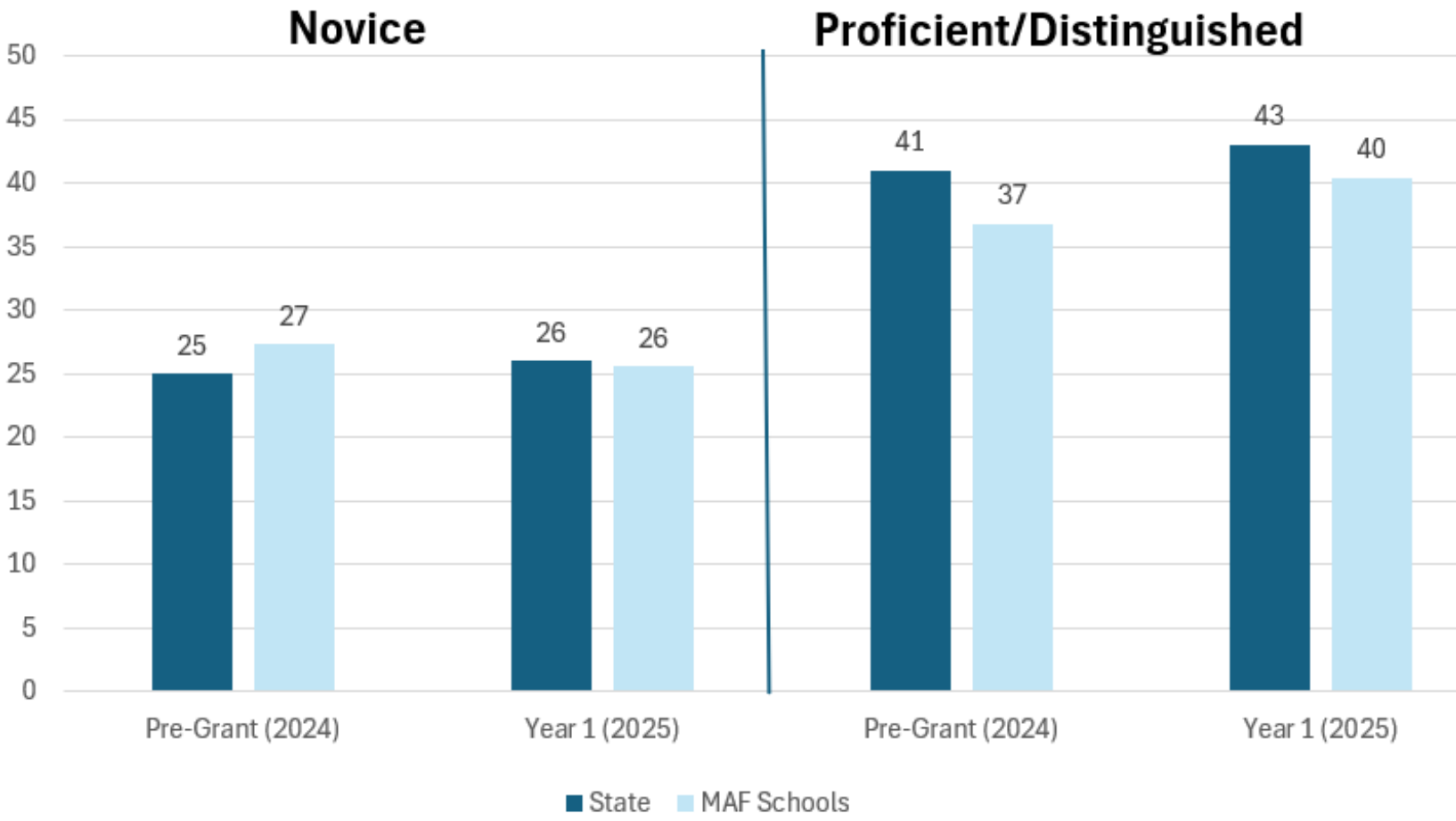
Cohort 2 KSA Mathematics Scores MAF Schools Average Compared to State – Grade 5



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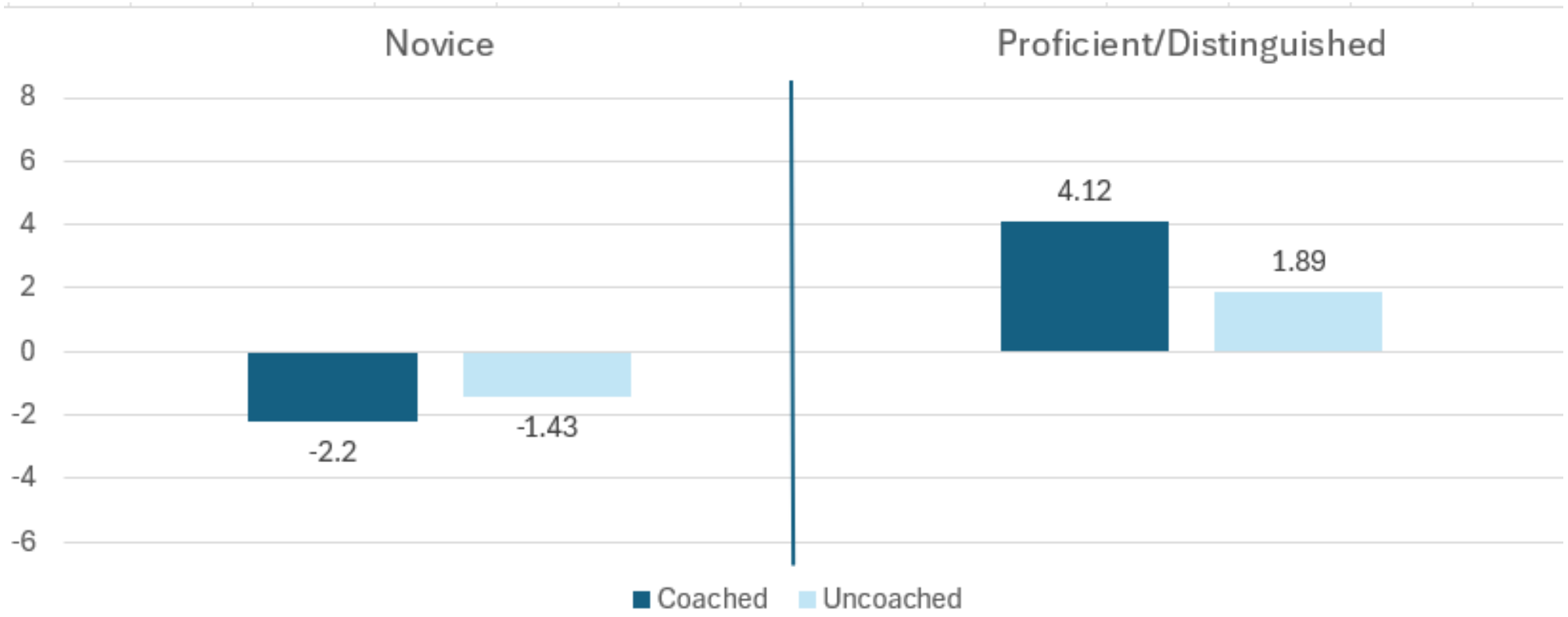
On average, cohort 2 schools reduced percent novice and increased percent proficient/distinguished in coached grade levels at a higher rate than in uncoached grade levels



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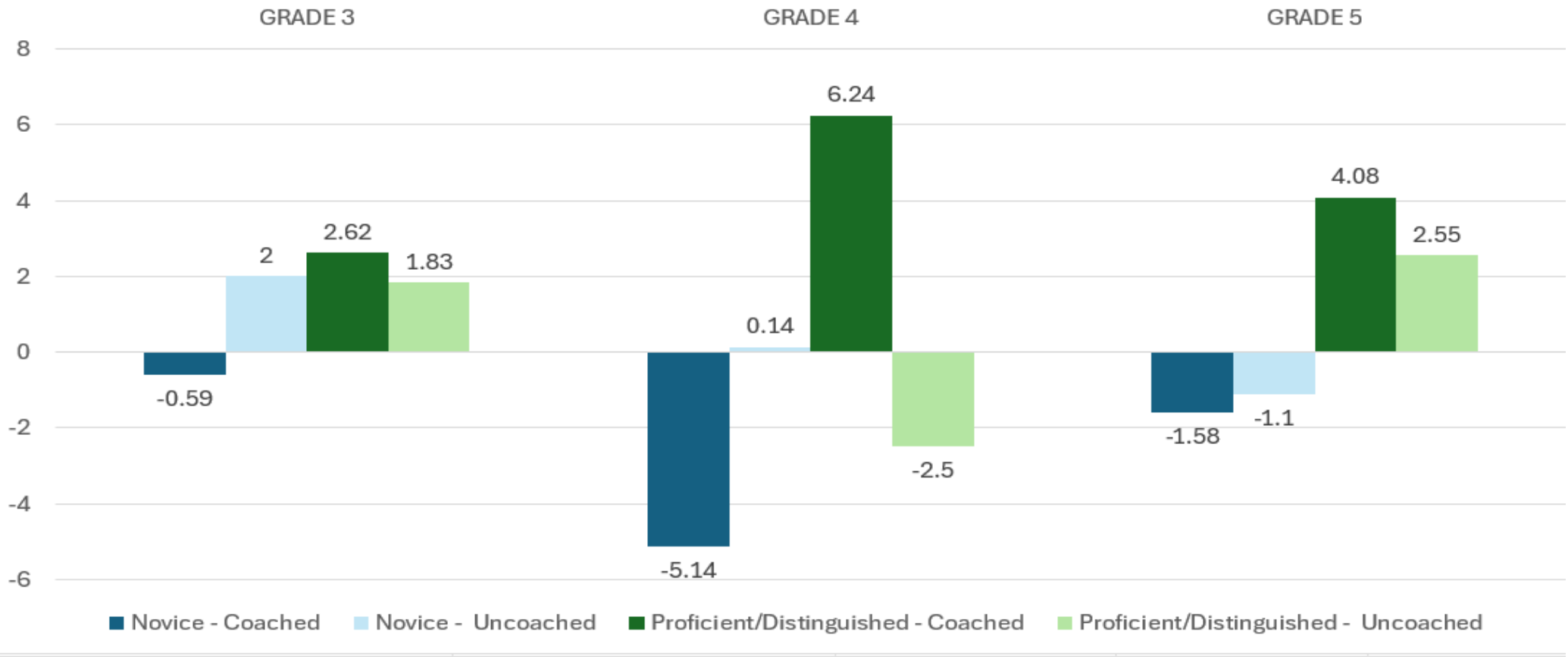
On average, students of 4th grade coached teachers made the most significant reduction in percent novice and increase in percent proficient and distinguished



Coached Grade Levels: 74
Uncoached Grade Levels: 44

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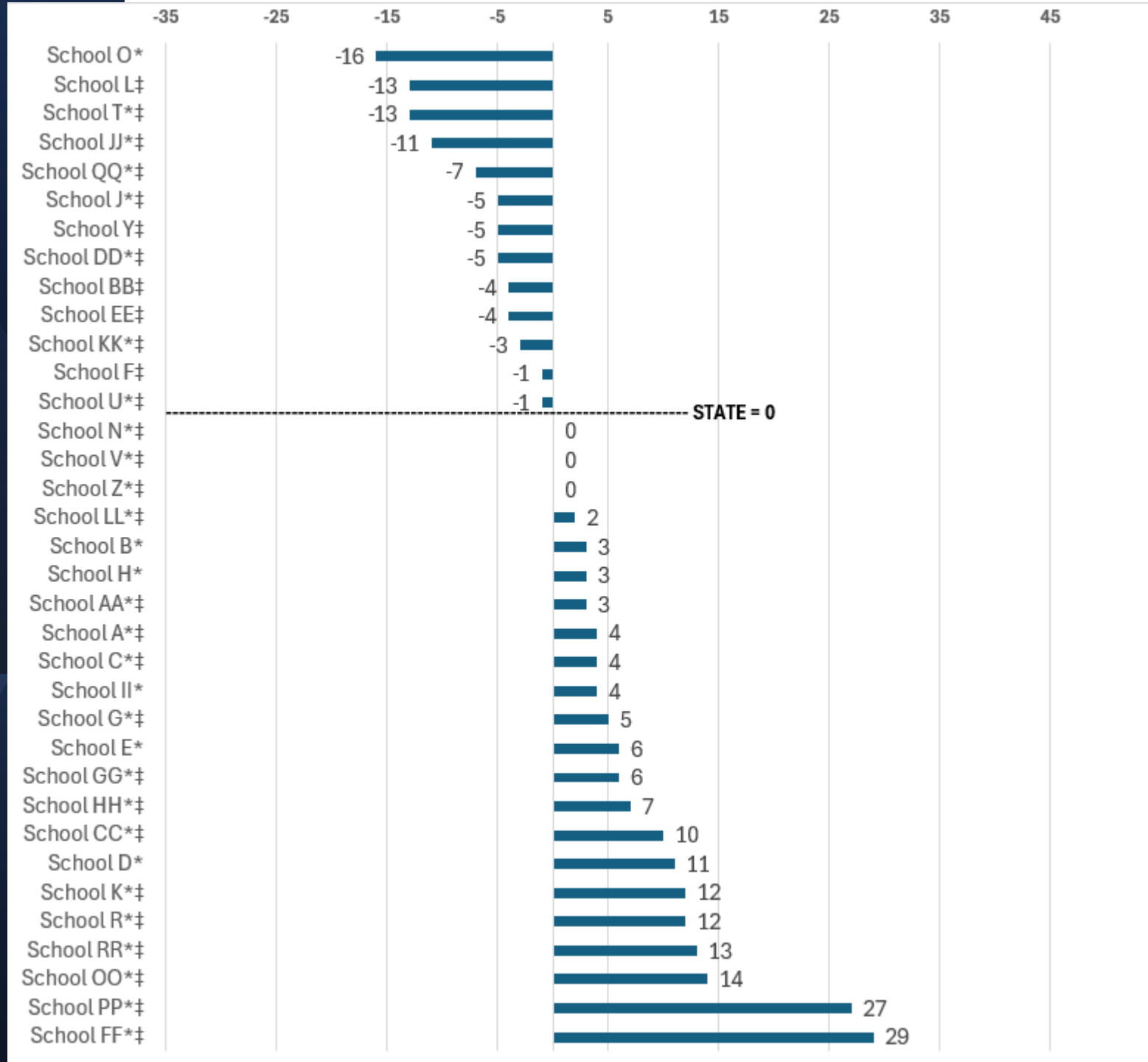
Cohort 2 Grade 3 Change in % P/D from 2024 to 2025

* = HQIR ‡ = Coached

Schools with positive growth: 19
Schools with double digit growth: 8

Schools with negative change: 13
Schools with double digit negative change: 4

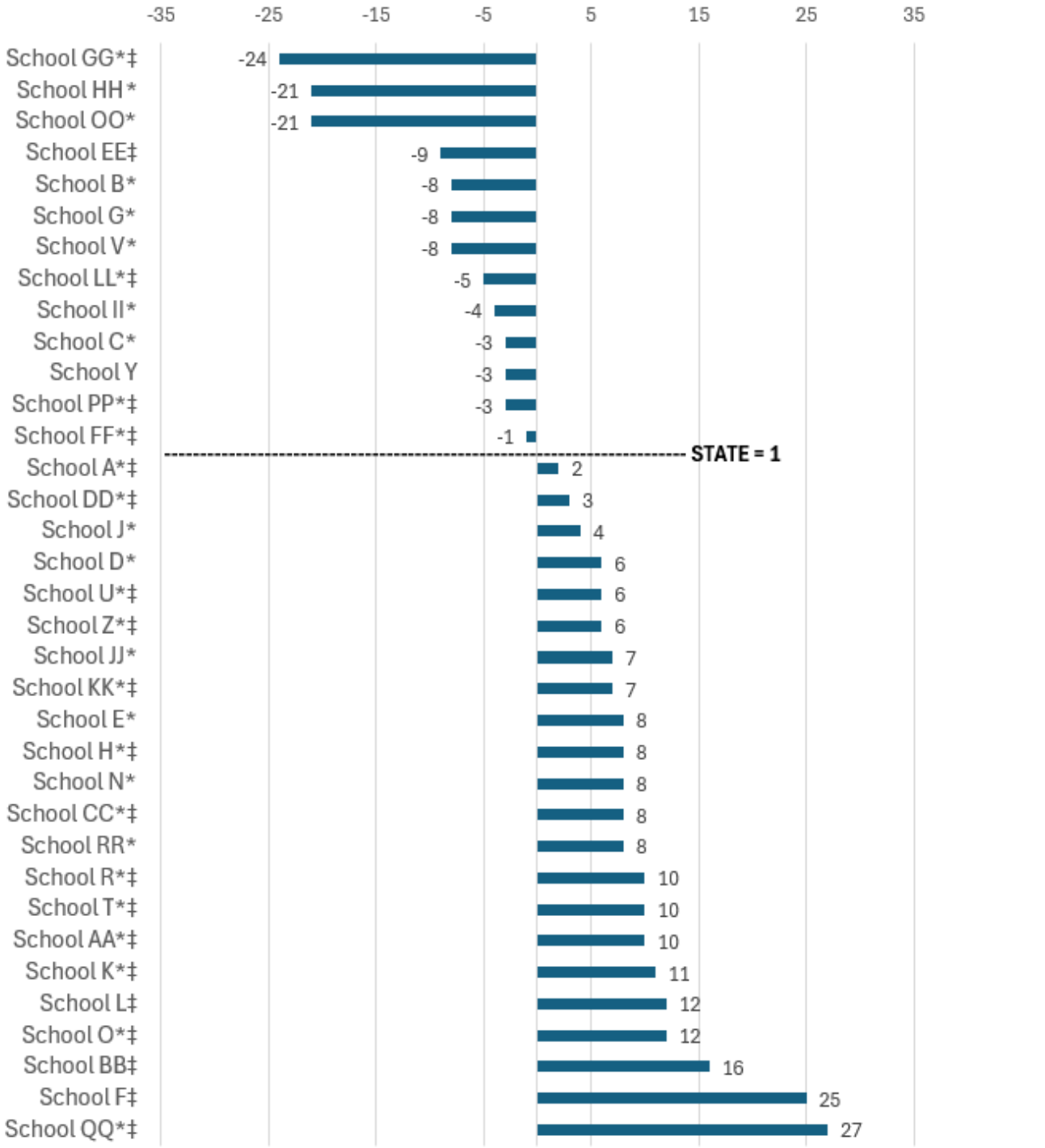


Cohort 2 Grade 4 Change in % P/D from 2024 to 2025

* = HQIR ‡ = Coached

Schools with positive growth: 22
Schools with double digit growth: 9

Schools with negative change: 13
Schools with double digit negative change: 3

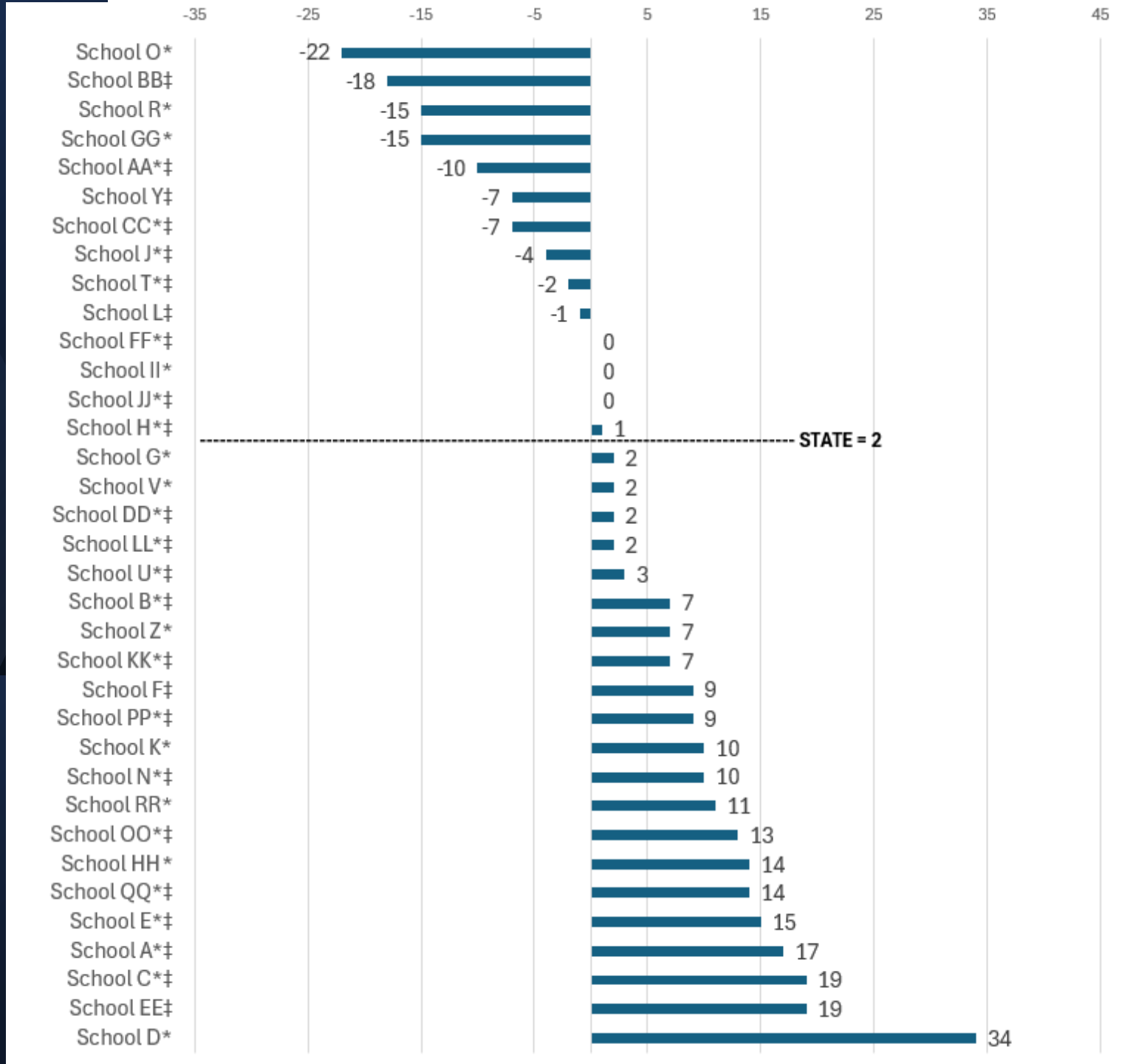


Cohort 2 Grade 5 Change in % P/D from 2024 to 2025

* = HQIR , ‡ = Coached

Schools with positive growth: 21
Schools with double digit growth: 11

Schools with negative change: 10
Schools with double digit negative change: 5



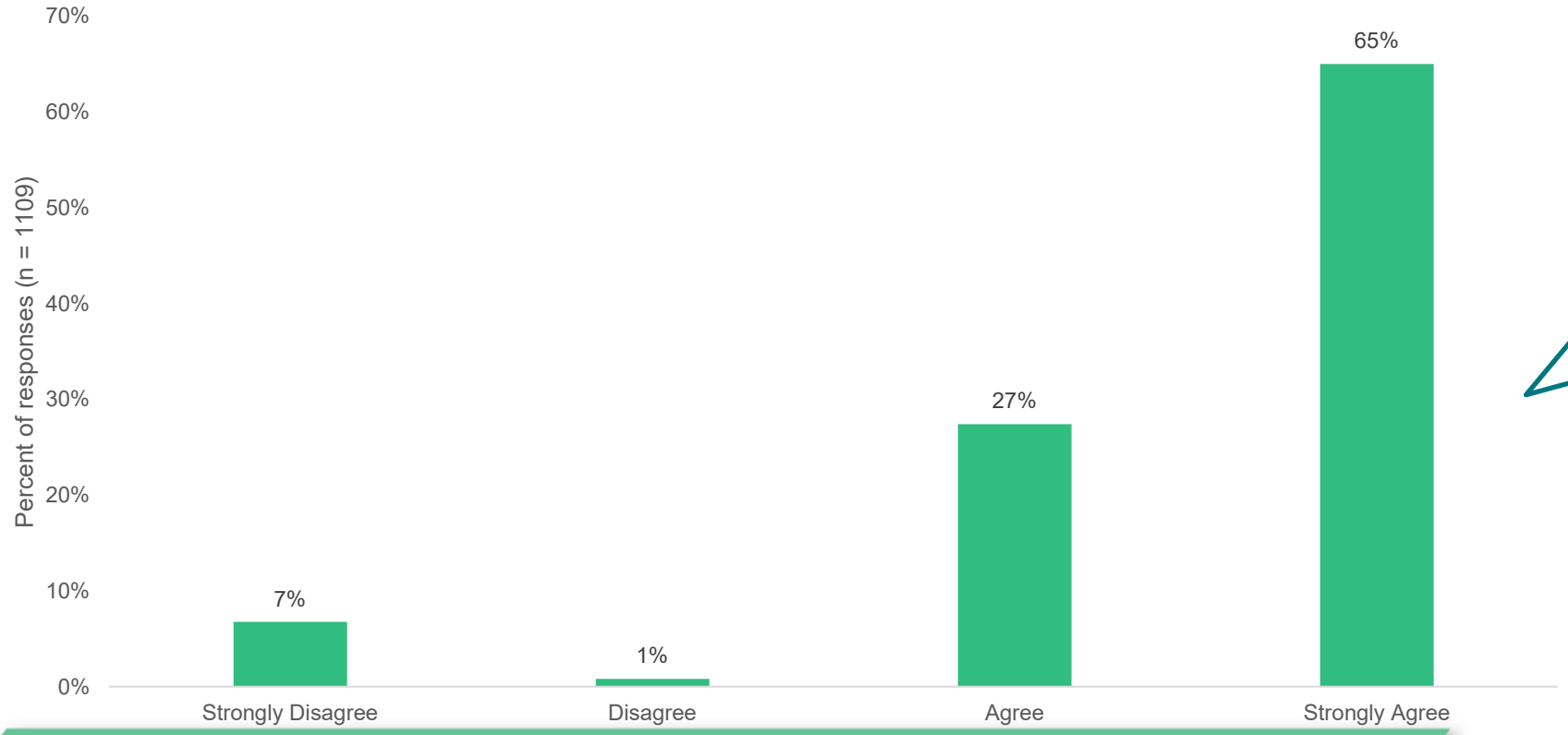
Kentucky Family Math Nights

Provide educators, children and family members an opportunity to learn and talk about mathematics in an engaging, supportive environment. Family members can participate in their child's learning and support their academic success. Family math night activities create a shared understanding of the math concepts and raise expectations for math knowledge and achievement, which promote children's success in school. (REL, 2019)

MAF schools receive professional learning, school access to materials aligned to the *Kentucky Academic Standards for Mathematics* and supplies through the partnership with the Kentucky Center for Mathematics.

Families participated actively in Kentucky Family Math Nights

"I actively engaged in the math station activities with my child."



7,293 students and family members attended Kentucky Family Math Night

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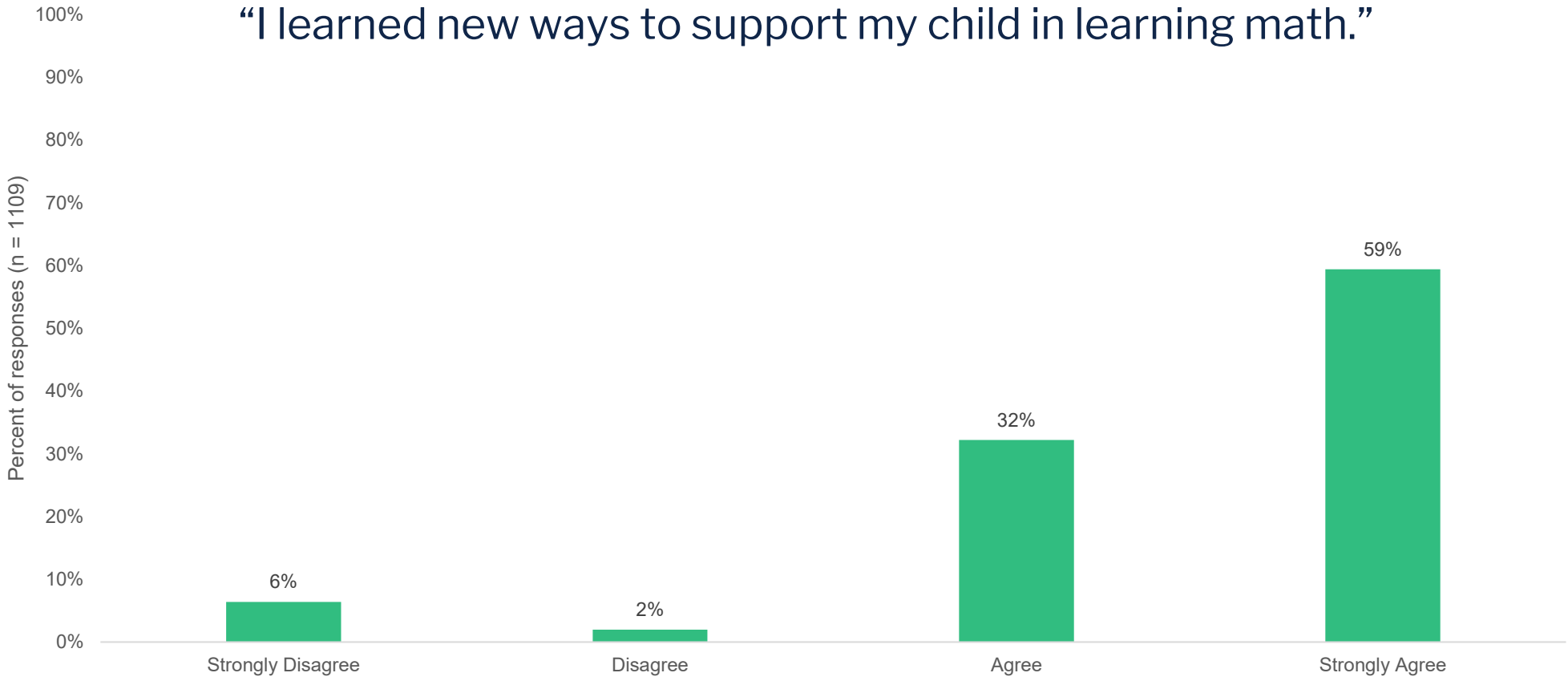
Kentucky Math Nights helped families learn new ways to support their child's learning in math



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Let’s hear it from Kentucky families

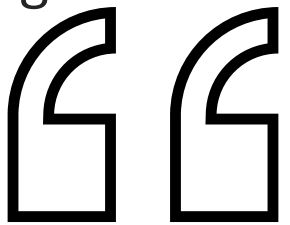
What did you enjoy about your KFMN experience?

- "Seeing my kid engage in the learning activities while having fun! "
- "Spending time with my child and learning."
- "The neat materials/games sent home."
- "The creativity and work that was put into this night. And seeing the happy faces of my kids while enjoying the games and entertainment."
- "The kids being able to learn and play at the same time and be hands on. "

Let’s hear it from Kentucky families

What new strategies or ideas did you learn from the KFMN?

- "Teamwork is always a good thing."
- "I learned that trying different strategies is okay and you should never give up!"
- "The packet we brought home along with the game makes learning math fun!"
- "Approach math from a positive perspective even when it is challenging."
- "My son seemed to really exercise his critical thinking skills."



Key Takeaways

MAF by the Numbers: Takeaways from 2024-2025...

- 19,867 Kentucky students were impacted by the MAF math coaching program.
- 5,170 hours of PL completed by MAF coaches, and 13 total since inception earned an Elementary Mathematics Specialist Endorsements (Spring 2025)
- 5,056 completed coaching cycles consisting of a planning conversation, observation/data collection and a reflecting conversation
- 89% of coached teachers grew at least one level on at least one EMTP when measured by the Kentucky Mathematics Innovation Tool
- 7,293 students and their family members engaged in learning math with their community during a Kentucky Family Math Night.

Kentucky Department of EDUCATION