

OKLAHOMA STATE DEPARTMENT OF  
**EDUCATION**  
— CHAMPION EXCELLENCE —

# Standards-Based Assessment System Analysis

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June 2019



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# RFI Response

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- In December 2018, Oklahoma Department of Education released a Request for Information (RFI) to assessment vendors of interim assessment programs commonly used within the state.
- Four assessment vendors responded with the requested information for ELA and mathematics:
  - Mastery Connect (Certica Item Bank)
  - Measured Progress (eMPower)
  - NWEA (MAP Growth)
  - Renaissance Learning (STAR)



# RFI Response

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- All assessment vendors claimed that their items were aligned to the Oklahoma Academic Standards but did not provide specific information about how they defined “alignment” with the standards or what specific criteria were used to evaluate alignment in the test development process.



# Overview

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- The study involved an analysis of the test program framework documentation provided by each assessment vendor and an **item-level content analysis**.
- External panelist ratings from the item-level analysis were compared with internally assigned metadata or internal coding associated with 100-item samples from **grade 4** and **grade 7** item banks.
- Note: this item review did not compare the interim assessments with the Oklahoma School Testing Program (OSTP) assessments.



# Test Item-level Claims

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- In the category of **Alignment Claims**, we report the claims made by each of the assessment programs regarding their alignment with various sets of standards, and any evidence they provide that undergird those claims.
- DOK Ranges are based on the DOK of the OAS. The standards set grade-level expectations and rigor as well as expectations for students to be college- and career-ready.



# **HOW WELL DID THE EVALUATORS AGREE WITH THE VENDORS' STANDARDS CODING?**



# Agreement with Vendor OAS Assignments

<b>Math</b>	<b>% Items with NO MATCH with given standard</b>	<b>% Items with PLAUSIBLE MATCH with given standard</b>	<b>% Items with MATCH with given standard</b>
eMPower Gr4	18%	25%	59%
eMPower Gr7	9%	6%	85%
MAP Growth Gr4	2%	0%	98%
MAP Growth Gr7	4%	6%	90%
Navigate Gr4	2%	1%	97%
Navigate Gr7	1%	2%	97%
STAR 360 Gr4	6%	12%	82%
STAR 360 Gr7	1%	0%	100%

# Agreement with Vendor OAS Assignments

<b>ELA</b>	% Items with <b>NO MATCH</b> with given standard	% Items with <b>PLAUSIBLE MATCH</b> with given standard	% Items with <b>MATCH with given standard</b>
eMPower Gr4	3%	14%	83%
eMPower Gr7	1%	9%	90%
MAP Growth Gr4	0%	17%	83%
MAP Growth Gr7	0%	16%	84%
Navigate Gr4	11%	22%	67%
Navigate Gr7	14%	22%	64%
STAR 360 Gr4	5%	16%	79%
STAR 360 Gr7	0%	16%	84%

# **WHAT IS THE BREADTH OF DEPTH OF KNOWLEDGE ASSESSED?**



<b>Gr. 4 Math DOK Alignment</b>	<b>DOK % agreement with internal coding</b>	<b>% items DOK 1 (based on external review)</b>	<b>% items DOK 2 (based on external review)</b>	<b>% items DOK 3 (based on external review)</b>	<b>% items DOK 4 (based on external review)</b>
<b>OSTP</b>		<b>25-35%</b>	<b>60-70%</b>	<b>5-15%</b>	<b>0%</b>
eMPower	86%	50%	50%	0%	0%
MAP	88%	52%	48%	0%	0%
Navigate	57%	31%	69%	0%	0%
STAR	92%	4%	77%	13%	6%



<b>Gr. 7 Math DOK Alignment</b>	<b>DOK % agreement with internal coding</b>	<b>% items DOK 1 (based on external review)</b>	<b>% items DOK 2 (based on external review)</b>	<b>% items DOK 3 (based on external review)</b>	<b>% items DOK 4 (based on external review)</b>
<b>OSTP</b>		<b>15-25%</b>	<b>65-75%</b>	<b>10-20%</b>	<b>0%</b>
eMPOWER	95%	24%	76%	0%	0%
MAP	93%	31%	69%	0%	0%
Navigate	59%	23%	77%	0%	0%
STAR	61%	38%	49%	13%	0%

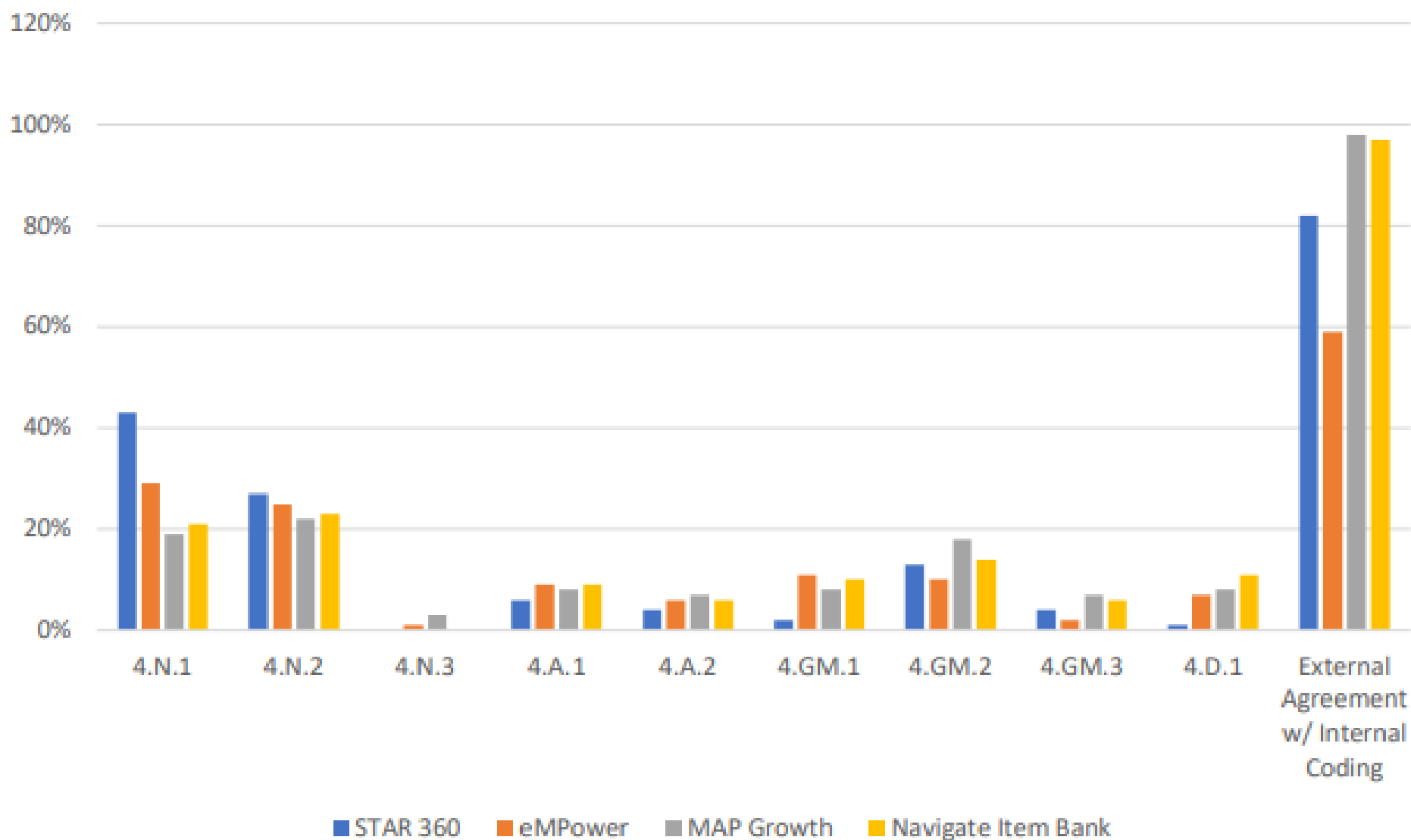
Gr. 4 ELA DOK Alignment	DOK % agreement with internal coding	% items DOK 1 (based on external review)	% items DOK 2 (based on external review)	% items DOK 3 (based on external review)	% items DOK 4 (based on external review)
OSTP		10-20%	65-75%	5-15%	0%
eMPOWER	98%	18%	77%	5%	0%
MAP	87%	36%	62%	2%	0%
Navigate	50%	20%	64%	15%	0%
STAR	95%	13%	74%	13%	0%

Gr. 7 ELA DOK Alignment	DOK % agreement with internal coding	% items DOK 1 (based on external review)	% items DOK 2 (based on external review)	% items DOK 3 (based on external review)	% items DOK 4 (based on external review)
OSTP		15-25%	65-75%	10-20%	0%
eMPOWER	92%	12%	81%	7%	0%
MAP	88%	19%	59%	22%	0%
Navigate	54%	23%	55%	21%	0%
STAR	95%	11%	75%	13%	0%

# **HOW WELL DO THE ASSESSMENTS ALIGN TO THE OKLAHOMA ACADEMIC STANDARDS?**

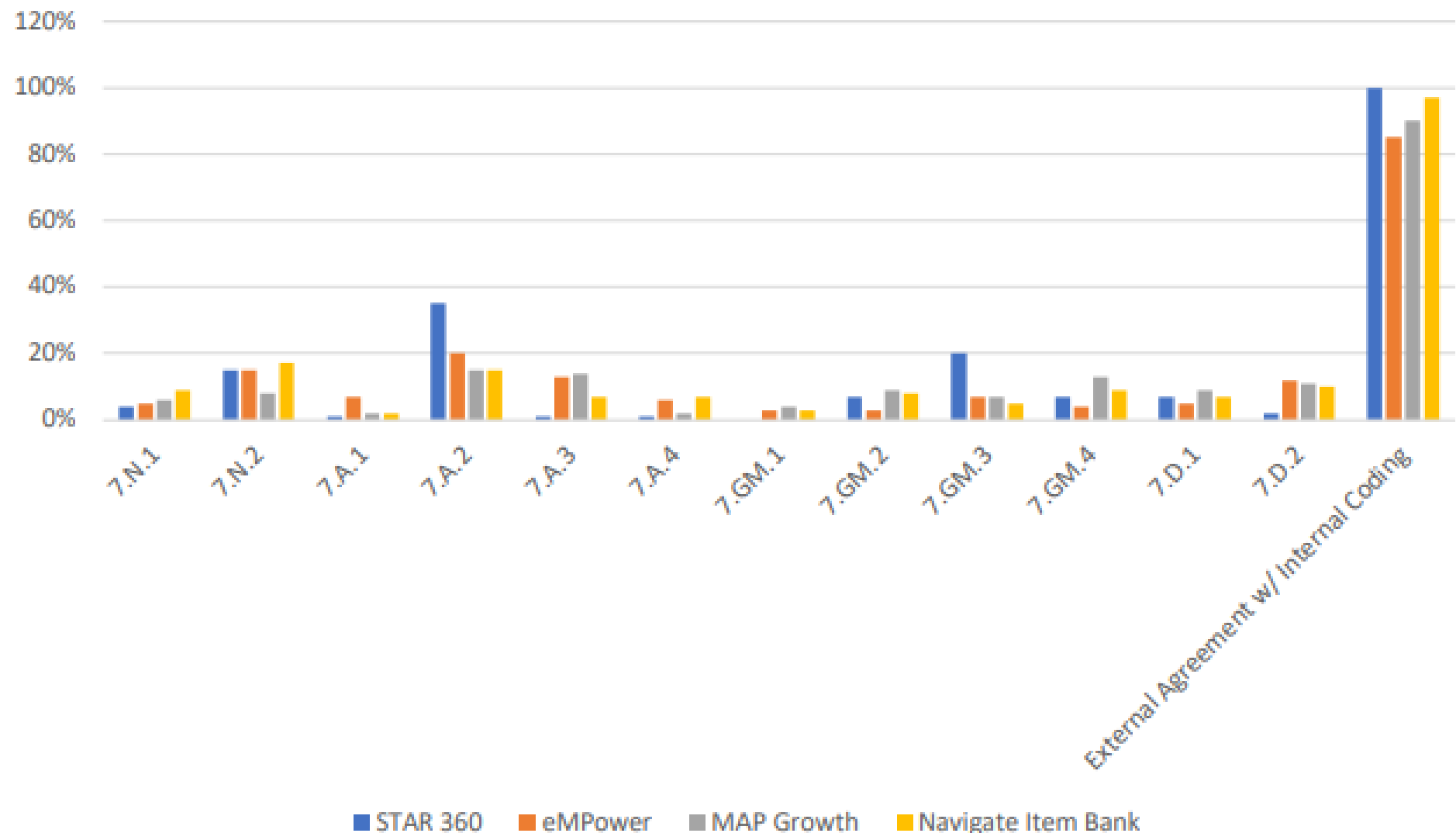


## Grade 4 Math: Distribution of Items by Domain (per vendor coding of 100 item sample)



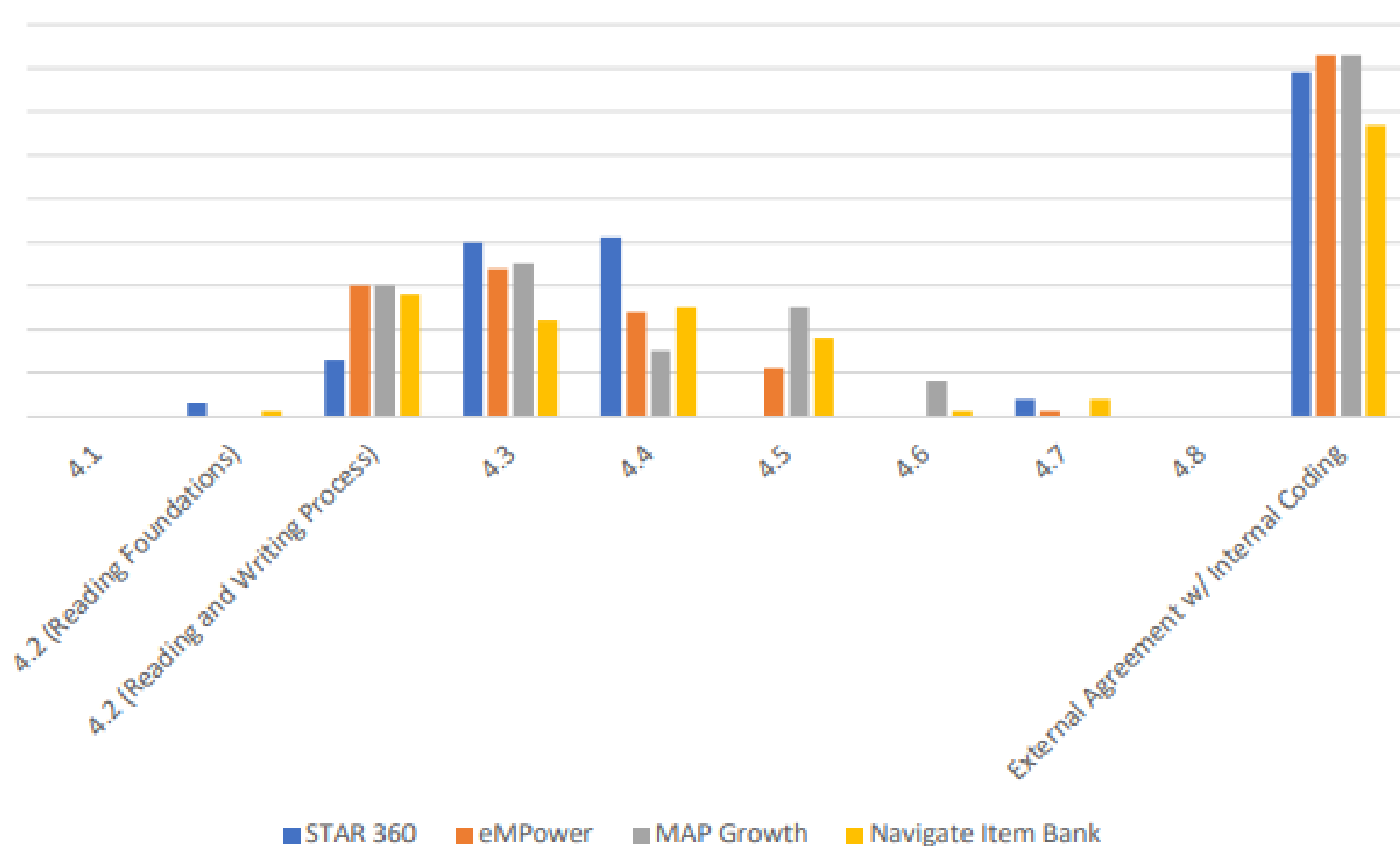
Grade 4 Math	eMPower	Navigate	MAP Growth	STAR 360
4.N.1 (7)	✓	4.N.1.4	✓	✓
4.N.2 (8)	✓	4.N.2.8	4.N.2.8	4.N.2.8
4.N.3 (1)	One item	4.N.3.1	✓	4.N.3.1
4.A.1 (3)	✓	✓	✓	4.A.1.3
4.A.2 (2)	✓	✓	✓	✓
4.GM.1 (3)	4.GM.1.3	✓	4.GM.1.3	4.GM.1.2, 4.GM.1.3
4.GM.2 (5)	4.GM.2.3	✓	✓	✓
4.GM.3 (2)	✓	✓	✓	4.GM.3.1
4.D.1 (3)	4.D.1.2	✓	✓	4.D.1.1, 4.D.1.2
Other concerns	None	None	None	11% targeted 4.N.1.1 13% targeted 4.N.2.2

Grade 7 Math: Distribution of Items by Domain (per vendor coding of 100 item sample)



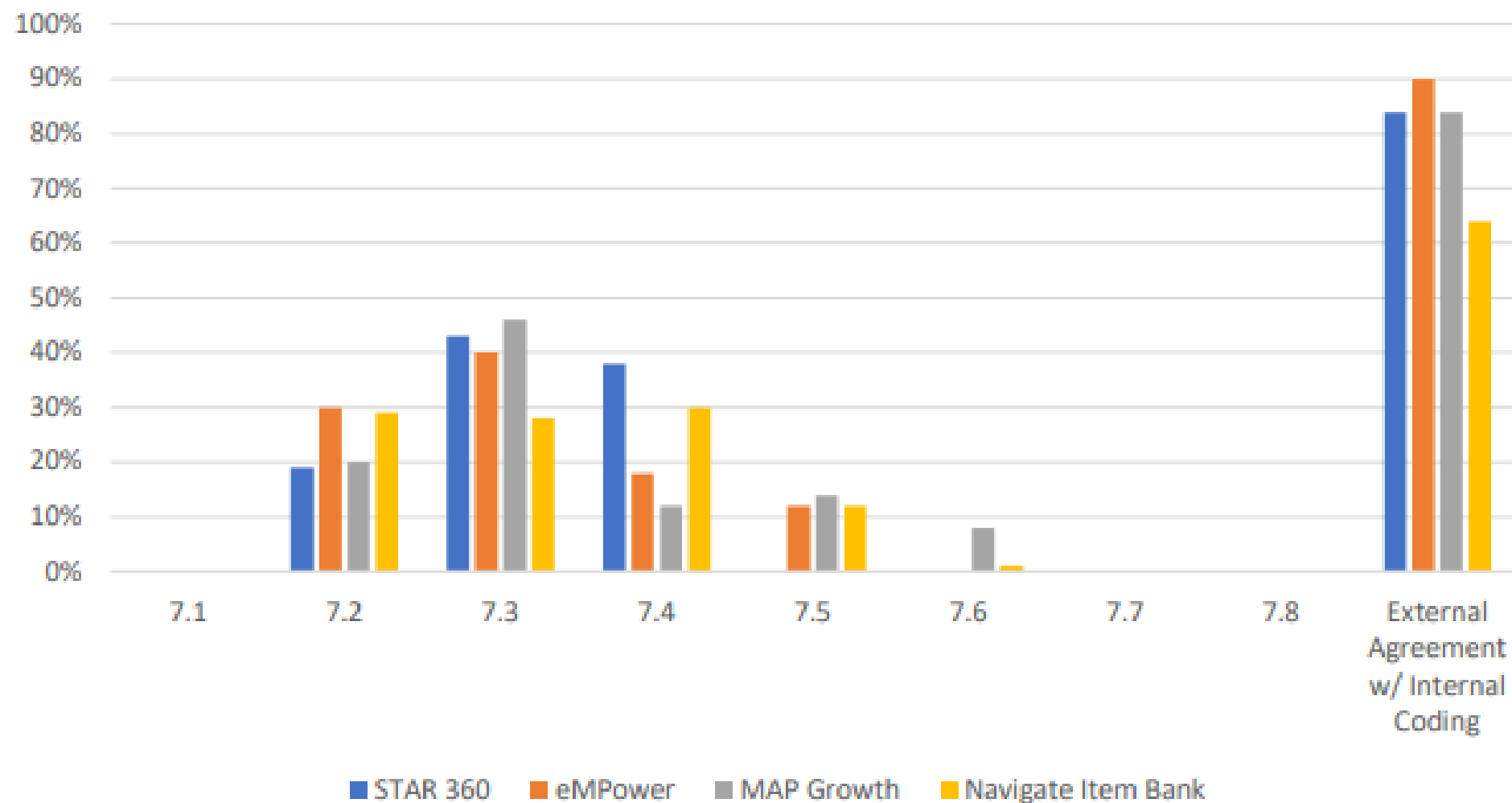
G7 Math	eMPower	Nav	MAP Growth	STAR 360
7.N.1 (3)	7.N.1.2	✓	✓	7.N.1.1
7.N.2 (6)	7.N.2.1	7.N.2.1	7.N.2.1, 7.N.2.2, 7.N.2.1, 7.N.2.5	7.N.2.1, 7.N.2.2
7.A.1 (2)	✓	✓	7.A.1.1	7.A.1.2
7.A.2 (4)	✓	7.A.2.4	7.A.2.4	7.A.2.2
7.A.3 (3)	✓	✓	✓	7.A.3.1, 7.A.3.2
7.A.4 (2)	7.A.4.2	✓	7.A.4.2	7.A.4.2
7.GM.1 (2)	7.GM.1.2	7.GM.1.1	7.GM.1.1	No items
7.GM.2 (2)	✓	✓	✓	7.GM.2.1
7.GM.3 (5)	✓	✓	✓	7.GM.3.1
7.GM.4 (3)	7.GM.4.3	✓	✓	7.GM.4.1, 7.GM.4.3
7.D.1 (2)	✓	✓	✓	✓
7.D.2 (3)	✓	✓	✓	7.D.2.1, 7.D.2.3
Other concerns	13% 7.A.2.1	None	None	15% 7.A.2.2; 20% 7.GM.3

Grade 4 ELA: Distribution of Items by Domain (per vendor coding of 100 item sample)



G4 ELA	eMPower	Navigate	MAP Growth	STAR 360
S2: R&W Process (8)	4.2.W.4	✓	4.2.R.4	4.2.R.4, 4.2.W.1-4
S3: Critical R&W (10)	4.3.R.4, 4.3.R.5, 4.3.W.3	✓	4.3.R.2	4.3.W.1, 4.3.W.2, 4.3.W.3
S4: Vocab (7)	4.4.R.2	✓	4.4.R.5, 4.4.W.1	4.4.R.2, 4.4.R.5, 4.4.W.1, 4.4.W.2
S5: Lang (9)	4.5.R.1, 4.5.R.3, 4.5.R.5, 4.5.W.4	✓	4.5.R.3, 4.5.R.4, 4.5.R.5, 4.5.W.1 4.5.W.4	No items
S6: Research (6)	No items	4.6.R.1, 4.6.W.2, 4.6.W.3	4.6.R.1, 4.6.R.3 4.6.W.1-3	No items
Other Concerns	13% 4.2.W.2	17% 4.3.R.3	none	31% 4.4.R.1

## Grade 7 ELA: Distribution of Items by Domain (per vendor coding of 100 item sample)



G7 ELA	eMPower	Navigate	MAP Growth	STAR 360
S2: R&W Process (8)	7.2.W.2	✓	7.2.W.5	7.2.W.1-5
S3: Critical R&W (11)	7.3.R.1, 7.3.W.1	7.3.R.1	7.3.R.1, 7.3.R.5 7.3.W.4	7.3.R.1, 7.3.R.7 7.3.W.1-4
S4: Vocab (7)	✓	✓	✓	7.4.W.1, 7.4.W.2
S5: Lang	7.5.R.1-3	7.5.W.3	7.5.R.1-3, 7.5.W.3	No items
S6: Research (7)	No items	7.6.R.1, 7.6.W.1, 7.6.W.4	7.6.R.1, 7.6.R.2, 7.6.W.1-4	No items
Other Concerns	13% 7.3.R.6	13% 7.3.R.3 14% 7.3.R.4	12% 7.2.R.1	22% 7.4.R.1

# Conclusions

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- Item-level analysis results varied by grade and/or subject.
- For ELA and mathematics, external reviewer agreement with test vendor DOK assignments varied from 50% to 98%.
- External reviewers found a close match with the test vendor standard correlation for 59% to 100% of ELA and mathematics items.



# Conclusions

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- Based on the item samples reviewed in this analysis, the assessment programs vary by grade, breadth of standards assessed, complexity of items, and other factors.
- Stakeholders can use the comparative information within this report to choose program(s) that are the best fit for the needs of their district.



# What next?

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- If your benchmark or interim assessment vendor did not participate, please encourage them to contact WCEPS and participate.
- Do a deep dive into your curriculum and evaluate strengths and weaknesses.
- Select a benchmark or interim assessment that best complements your program based on research.



# Contact Us

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