

FINAL REPORT

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Kindergarten Readiness Indicators (KRI): Spring 2022 Results Overview

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Introduction

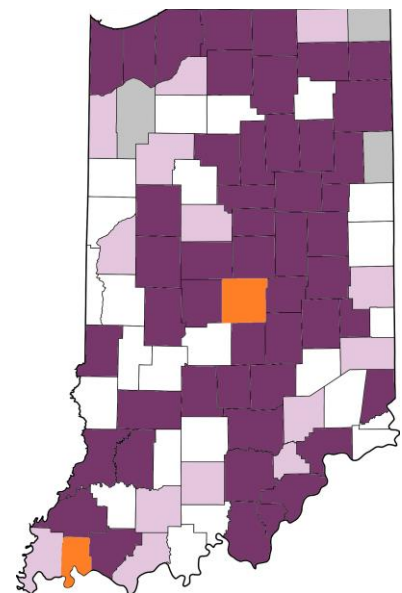
The Kindergarten Readiness Indicators (KRI) is an assessment meant to measure selected foundational academic skills needed for success in kindergarten. The goal of the KRI is to assess children's understanding of six oral language, literacy, and math skills in the spring before kindergarten entry. Previous research has shown that the six skills assessed in the KRI contribute to students' future academic success. Results from the KRI can help educators and policy makers understand the extent to which preschool children are academically ready for kindergarten.

The KRI assessment is in its third year of statewide administration conducted by FSSA for programs funded via the On My Way (OMW) Pre-K program. In the Spring of 2019, it was administered to a sample of preschoolers in Vanderburgh and Marion counties as part of a Pilot Study sponsored by the Richard M. Fairbanks Foundation and Welborn Baptist Foundation. KRI administration was expanded in 2021 and offered to students in OMW Pre-K programs state-wide.

Figure 1 illustrates KRI administration by County; counties in orange were included in the 2019 Pilot. Counties in dark purple had at least one program administer the assessment in 2021 and 2022. Counties in light purple administered the assessment in 2022 only while counties in gray administered the assessment in 2021 only. Counties in white have not yet administered the KRI.

The purpose of this report is to summarize results from the state-wide KRI administration conducted in Spring 2022.

Figure 1. KRI Administration by County



KRI Skills and Target Categories

The KRI measures students' understanding of key oral language, literacy, and math skills (Table 1).

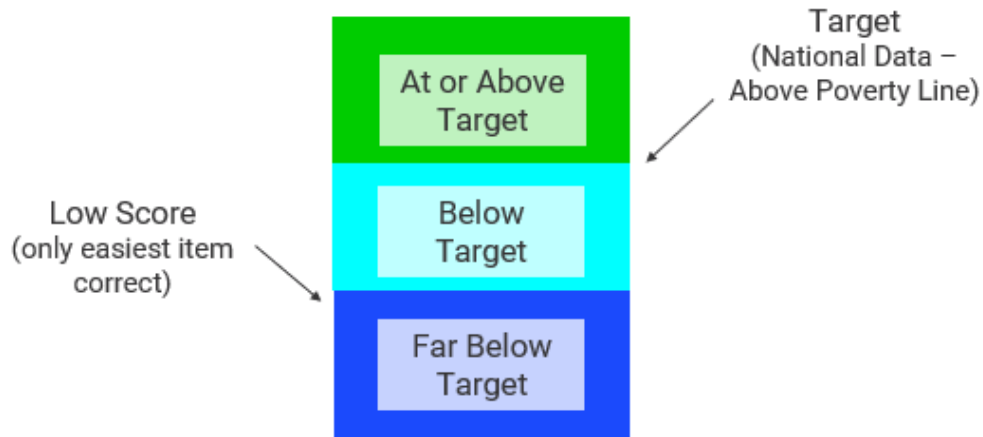
Students' scores for each skill are classified into three categories: "At or Above Target," "Below Target," and "Far Below Target." Our results will show the percentage of students that fall into each of these categories in a color-coded stacked bar graph (Figure 2). Students in the dark blue "Far Below Target" category have a score that corresponds to not getting the easiest item correct. Students in the green "At or Above" target category have scores that are greater than or equal to our target score. This target

score is calculated from nationally representative data; it corresponds to how we expect students not living in poverty to perform in each skill. Students in the light blue “Below Target” category are getting at least the easiest item correct but are performing below the target threshold.

Table 1. KRI Skills

Domain	Domain and Skill	Easiest Item	Target
Oral Language and Literary (OLL)	Letter ID	Identifies uppercase letter “B”	Identifies less common uppercase and lowercase letters
	Letter-Sound Correspondence	Produces sounds that correspond to lowercase letter “s”	Produces sounds corresponding to less common letters
	Rhyming	Produces a word that rhymes with “bat”	Produces rhymes for words that do not have as many rhymes
	Sentence Comprehension	Identifies a picture that matches the sentence “the girl is not running”	Identifies sentences with multiple subjects and prepositions
Math	Numerical Thinking	Gives 5 objects from a larger set	Understands the cardinal meaning of number words and can order small sets of objects by size
	Spatial Thinking	Finds curve embedded in the bottom of a larger shape	Reasons about shapes and shape features, simple spatial relationships, and repeating patterns

Figure 2. KRI Target Categories



Spring 2022 Administration

3,468 preschoolers in OMW Pre-K programs across the state of Indiana were assessed in the Spring of 2022. Of all assessments completed in 2022, 2,943 students in 584 programs across 67 counties were matched to student administrative data in the OMW Pre-K system¹. Table 2 shows the number and percentage of students in the sample disaggregated by demographic characteristics.

Table 2. Selected Demographics of 2022 Sample

Characteristic	Classification	Number	Percent
Gender	Male	1412	48%
	Female	1531	52%
Race	White	1172	48%
	Black/African-American	998	34%
	Hispanic (any race)	241	8%
	Mixed (Bi-Racial/Multi-Racial)	202	7%
	Other	330	11%

¹ We expect there to be assessments that were not successfully matched to students in the OMW system. For example, these 525 assessments could belong to students in PreK classroom that were not enrolled in OMW or OMW students that could not be identified due to assessor data entry errors.

Characteristic	Classification	Number	Percent
Home Language (DLL Status)	English	2771	94%
	Other	172	6%
Urbanicity	Urban	2128	72%
	Rural	184	6%
	Mixed	629	21%
Auspice	Center	1528	52%
	School	744	25%
	Registered Ministry	460	16%
	Home	209	7%
Attendance	Less than 35 hours/week	1079	72%
	At least 35 hours/week	416	28%

While all OMW Pre-K students were eligible to complete the KRI starting in 2021, there was a significant increase in assessments this year compared to the 2,050 completed last year. In terms of demographics, the 2022 sample was similar to the group of students assessed in 2021 with two notable exceptions. First, there was a lower proportion of White students and a higher proportion of Black students assessed this year compared to the previous year. Second, there was a higher proportion of students attending Registered Ministries and a lower proportion of students attending Schools this year compared to 2021.

Assessment Results

Overall State-Wide Results

Figure 3 illustrates student performance on each KRI skill. Students in green are at or above target scores; students in light blue are below target scores; and students in dark blue are far below target scores.

Figure 3. Student KRI Performance, Skill-specific

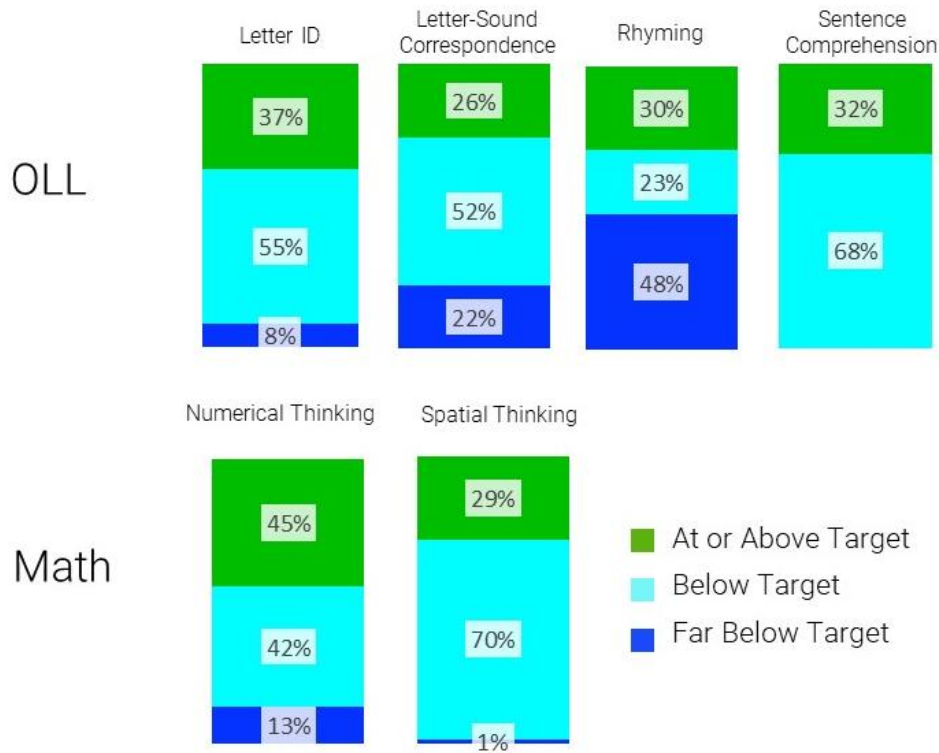


Figure 4 presents the percentage of students performing at or above the target score in Oral Language and Literacy (OLL) and math skills. For the OLL skills, 63% of students performed at or above the target score for at least one of the four skills. For the two math skills, 53% of students performed at or above the target score for at least one skill.

Figure 4. Number of Skills At or Above Target



Differences in Skill Scores Based on Student Demographics

Analyses were performed to understand how students performed by demographic characteristics. Table 3 presents results for each evaluated OLL and Math skill. A purple dot indicates there were statistically significant differences among the demographic groups in the 2021 KRI assessment. A yellow dot indicates there was a statistically significant difference in the 2022 KRI assessment. No dot indicates no statistical difference was found either year.

Table 3. Differences in Skill Scores Based on Student Demographics

Skill	Gender	Race/ Ethnicity	DLL Status	Urbanicity	Auspice	Attendance
Letter ID	• •	• •	•	•	• •	
Letter-Sound Correspondence	• •	•	•		• •	
Rhyming	• •	• •	• •	•	• •	
Sentence Comprehension	• •	• •	• •	•	• •	
Numerical Thinking		• •	•	•	• •	
Spatial Thinking	• •	• •	•	•	• •	

• = 2021 group difference; • = 2022 group difference

Summary of Findings

Gender: Girls outperformed boys in all skills except Numerical Thinking

Race/Ethnicity: Difference in all skills

- White students outperformed:
 - Black and Hispanic students on Rhyming
 - All other students on Sentence Comprehension
 - Black and Mixed students on Numerical Thinking
 - Black, Hispanic, and Mixed students on Spatial Thinking
- White students underperformed compared to:
 - Black students on Letter ID
 - Black and Other students on Letter-Sound Correspondence

DLL Status: Difference in all skills

- Non-DLL students outperformed DLL students on Rhyming and Sentence Comprehension
- DLL students outperformed non-DLL students on Letter ID, Letter-Sound Correspondence, Numerical Thinking and Spatial Thinking

Urbanicity: Difference in all skills except Letter ID and Letter-Sound Correspondence

- Students attending programs in Rural Counties outperformed students attending programs in Urban and Mixed counties on Rhyming, Sentence Comprehension, Numerical Thinking, and Spatial Thinking

Auspice: Difference in all skills except Letter ID and Letter-Sound Correspondence

- Students in Homes outperformed:
 - Students in all other Auspice types on Letter ID and Letter-Sound Correspondence
 - Students in Centers and Registered Ministries on Rhyming
 - Students in Centers on Sentence Comprehension and Numerical Thinking
 - Students in Centers and Schools on Spatial Thinking

Attendance: No differences in KRI scores were found based on students' attendance hours. There was no difference in KRI scores regardless of attendance hours or whether students attended their program full-time or less.

Trends consistent with 2021 Assessment Results

Overall, results from the 2022 KRI assessment were consistent with findings from the previous year despite the significant increase in the number of students assessed (3,468 in 2022 vs 2,050 in 2021) across a larger number of counties in the state (67 in 2022 vs 55 in 2021).

In particular, we found similar patterns in:

- The percentage of students at or above target in at least one skill for both OLL and Math.
 - 63% of students performed at or above target in one of the four OLL skills in 2022, compared to 62% in 2021.
 - 53% of students performed at or above target in one of the four math skills in 2022, compared to 55% in 2021.
- Gender: girls continue to outperform boys on all skills except Numerical Thinking
- Race: White students continue to outperform certain groups on Rhyming, Sentence Comprehension, Numerical Thinking and Spatial Thinking. This pattern held even with the difference in the race distribution of students across the two assessment years.
- Auspice type: students who attend homes continue to outperform students in other auspices
- Attendance: the hours a student attends a program continues to not be statistically significantly related to their KRI scores on any skill