



**Harrison County Community Foundation
Pre-K Pilot
2018 Mid-Year Data Summary**



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Harrison County Community Foundation Pre-Kindergarten Pilot

Mid-Year Data Summary February 2018

Figure 1: Reading and Language Total Means.....	5
Figure 2: Reading and Language Subject Paired Samples T-Test Means	5
Figure 3: Math and Quantitative Reasoning Total Means	6
Figure 4: Math and Quantitative Reasoning Subject Paired Samples T-Test Means	6
Figure 5: Social and Emotional Development Total Means	7
Figure 6: Social and Emotional Development Subject Paired Samples T-Test Means	7
Figure 7: ISTAR KR Phonological Awareness	9
Figure 8: ISTAR KR Print Concepts, Phonics and Word Recognition	9
Figure 9: ISTAR KR Informational Texts	10
Figure 10: ISTAR KR Literature Texts.....	10
Figure 11: ISTAR KR Writing Standards	11
Figure 12: ISTAR KR Language Conventions.....	11
Figure 13: ISTAR KR Comprehension and Collaboration.....	12
Figure 14: ISTAR KR Presentation of Knowledge and Ideas.....	12
Figure 15: ISTAR KR Counting and Quantity.....	13
Figure 16: ISTAR KR Algebraic Thinking.....	13
Figure 17: ISTAR KR Time.....	14
Figure 18: ISTAR KR Location	14
Figure 19: ISTAR KR Length, Capacity, Weight and Temperature.....	15
Figure 20: ISTAR KR Geometry	15
Figure 21: ISTAR KR Sense of Self and Others.....	16
Figure 22: ISTAR KR Manages Emotions	16
Figure 23: ISTAR KR Interpersonal Skills.....	17
Figure 24: ISTAR KR Responsibility	17
Figure 25: ISTAR KR Problem Solving.....	18
Figure 26: ISTAR KR Approaches to Learning.....	18



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I-STAR KR Assessment

The I-STAR KR assessment tool is a comprehensive observational record of a child's functional capacities across the following areas of development: reading and language, math and quantitative reasoning, and social and emotional development. Teachers watch students carefully to determine function level across multiple observations.

The evaluation team uses paired samples t-tests to determine whether improvements in mean scores for each module are statistically significant; meaning consistent enough and large enough across the whole group of students to indicate the improvement is not just chance and is tied to students' shared experience—in this case, their pre-K participation. "Paired samples" means we only use data for students for whom we have both pre- and mid-year data.

The p-value indicates the probability that the change in mean score would have occurred by chance. A $p < .001$ means there is a less than 0.1% chance that mean scores would have changed that much by chance or if kids were randomly selected for the assessment with no attention to whether they attended pre-school.

Reading and Language

The assessment includes eight English and Language Arts modules. Students exhibited significant improvement in all eight modules and in the Reading and Language category as a whole. Some portion of this change may be attributable to the fact that by mid-year teachers know the children better and have more observations upon which to base their assessment, but the shifts are large enough to indicate real impact of the pre-K intervention.

Figure 1: Reading and Language Total Means

Reading and Language Category Means	Pre-Survey	Mid-Year
Full Data (n= 140 and n= 122)	32.9	45.8
Paired Samples (n= 122)	32.2	45.8*

*Denotes significance of $p < .001$. Significance is only determined for paired samples (cases where we have both a pre- and mid-year assessment).

Figure 2: Reading and Language Subject Paired Samples T-Test Means

ISTAR KR Reading and Language Subject Scores (Paired Data) n= 122	Pre-Survey Mean	Mid-Year Mean
Reading and Language Total	32.2	45.8*
Phonological Awareness	25.8	40.5*
Print Concepts, Phonics, and Word Recognition	35.0	51.2*
Informational Texts	31.3	44.0*
Literature Texts	28.1	42.3*
Writing Standards	34.3	49.1*
Language Conventions	38.8	50.6*
Comprehension and Collaboration	26.6	39.0*
Presentation of Knowledge and Ideas	37.8	50.0*
Median Age (months)	55.0	58.0

*Denotes significance of $p < .001$. Significance tests include only those cases for which we have both pre-survey and mid-year data (we refer to these throughout as “paired samples.”)

Math and Quantitative Reasoning

Six modules measure kindergarten readiness in the Mathematics category. Students exhibited significant improvement in all six modules and in the Math and Quantitative Reasoning category as a whole.

Figure 3: Math and Quantitative Reasoning Total Means

Math and Quantitative Reasoning Category Means	Pre-Survey	Mid-Year
Full Data (n= 140 and n= 122)	32.2	43.5
Paired Samples (n= 122)	31.5	43.5*

*Denotes significance of $p < .001$

Figure 4: Math and Quantitative Reasoning Subject Paired Samples T-Test Means

ISTAR KR Math and Quantitative Reasoning Subject Scores (Paired Data) n= 122	Mean Pre-Survey Score	Mean Mid-Year Score
Math and Quantitative Reasoning Total	31.5	43.5*
Counting and Quantity	32.9	44.6*
Algebraic Thinking	38.4	53.9*
Time	28.3	38.6*
Location	25.6	36.6*
Length, Capacity, Weight, and Temperature	31.8	42.7*
Geometry	31.8	44.5*
Median Age (months)	55.0	58.0

*Denotes significance of $p < .001$

Social and Emotional Development

Six modules measure kindergarten readiness in the Social Emotional Skills category. Students exhibited significant improvement in all six modules and in the Social and Emotional Development category as a whole.

Figure 5: Social and Emotional Development Total Means

Social and Emotional Development Category Means	Pre-Survey	Mid-Year
Full Data (n= 140 and n= 122)	32.8	44.3
Paired Samples (n= 122)	31.9	44.3*

*Denotes significance of $p < .001$

Figure 6: Social and Emotional Development Subject Paired Samples T-Test Means

ISTAR KR Social and Emotional Development Subject Scores (Paired Data) n= 122	Mean Pre-Survey Score	Mean Mid-Year Score
ISTAR KR Social and Emotional Development Total	31.9	44.3*
Sense of Self and Others	38.3	50.9*
Manages Emotions	30.0	43.8*
Interpersonal Skills	31.5	42.6*
Responsibility	31.9	41.9*
Problem Solving	30.0	44.1*
Approaches to Learning	29.8	42.2*
Median Age (months)	55.0	58.0

*Denotes significance of $p < .001$

Appendices

The ISTAR KR assessment instruments offer progressive responses within each assessment item, meaning that the difficulty or skill level increases further down the table. The percentage for each item reflects the percent of students who mastered that skill level, except in the case of “No Evidence,” which is the percent of students who show no evidence of the skills documented in the table. Students must master the basic foundations of a module before advancing to the next level.

There is no Indiana Common Core Standard for the ISTAR category Social and Emotional Development, so this category of the kindergarten readiness assessment does not describe when students have mastered skills that prepare them for kindergarten schooling. Instead this category measures social and emotional skills that are expected to be mastered by children over the age of 5.

Note: These tables do not match the 2015-2016 mid-year tables. The evaluation team believes this format is easier to read. Take care not to compare these tables to those in the 2015-2016 mid-year report. Data for all years will appear in a common format for the final Pilot report.

Appendix A: Language and Reading, Full Frequency Percentages

Figure 7: ISTAR KR Phonological Awareness

Phonological Awareness	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	25.8	40.5	
Median Age (months)	55.0	58.0	
No evidence	NA	NA	4
Responds to sounds in the environment	100.0%	100.0%	10
Produces a variety of sounds	82.9%	94.3%	22
Produces and blends the sounds of letter patterns into recognizable words	24.3%	70.5%	46
Compares sounds of different words	0.0%	10.7%	67
KG Standards: Distinguishes sounds within words (to be mastered by end of KG)	0.0%	0.0%	72

Figure 8: ISTAR KR Print Concepts, Phonics and Word Recognition

Print Concepts, phonics, and word recognition	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	35.7	51.2	
Median Age (months)	55.0	58.0	
No evidence	1.4%	NA	7
Responds to familiar pictures	98.6%	100.0%	25
Labels familiar pictures	63.6%	93.4%	37
Recognizes familiar symbols	13.6%	59.8%	61
Compares, combines, and orders letters and letter sounds	0.7%	9.8%	67
KG Standard: Recognizes that letters make words and words make sentences (to be mastered by the end of KG)	0.0%	0.0%	72

Figure 9: ISTAR KR Informational Texts

Informational Texts	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	32.0	44.0	
Median Age (months)	55.0	58.0	
No evidence	1.4%	NA	7
Engages with a book	98.6%	100.0%	16
Imitates proper handling of books	75.7%	100.0%	34
Distinguishes print from pictures	15.7%	68.9%	46
Orients to print in books	4.3%	11.5%	61
KG Standard: Chooses reading activities for meaning (to be mastered by end of KG)	0.0%	0.0%	72

Figure 10: ISTAR KR Literature Texts

Literature Texts	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	28.9	42.3	
Median Age (months)	55.0	58.0	
No evidence	14.3%	0.8%	16
Reacts to a story or event	85.8%	99.1%	22
Identifies details from a story or picture	42.2%	93.4%	37
Talks about characters and settings	9.3%	40.9%	49
Retells familiar stories	3.6%	14.7%	58
KG Standard: Comprehends and responds to stories (to be mastered by end of KG)	0.0%	0.8%	72

Figure 11: ISTAR KR Writing Standards

Writing Standards	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	35.0	49.1	
Median Age (months)	55.0	58.0	
No evidence	1.4%	NA	13
Intentionally makes marks or scribbles	98.6%	100.0%	28
Associates writing with purpose	42.2%	90.2%	43
Creates writing with the intention of communicating	4.3%	35.3%	64
Produces recognizable writing that conveys meaning	0.0%	3.3%	70
KG Standard: Gathers ideas for writing for a purpose (to be mastered at the end of KG)	0.0%	0.0%	72

Figure 12: ISTAR KR Language Conventions

Language Conventions	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	39.6	50.6	
Median Age (months)	55.0	58.0	
No evidence	NA	NA	13
Grasps writing tools	100.0%	100.0%	31
Imitates specific writing strokes to make a picture	54.9%	96.6%	37
Copies specific writing marks	27.8%	65.5%	52
Approximates writing strings of letters	7.1%	26.2%	67
KG Standard: Writes from left to right spacing letters correctly (to be mastered by end of KG)	0.0%	0.0%	72

Figure 13: ISTAR KR Comprehension and Collaboration

Comprehension and Collaboration	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	27.4	39.0	
Median Age (months)	55.0	58.0	
No evidence	0.7%	NA	4
Responds to cues in the environment	99.3%	100.0%	13
Responds to familiar gestures and words	75.7%	100.0%	25
Follows a familiar verbal or signed direction	32.1%	100.0%	40
Follows unfamiliar direction	5.0%	23.8%	52
KG Standard: Follows directions with steps and descriptors (to be mastered by end of KG)	0.0%	0.0%	72

Figure 14: ISTAR KR Presentation of Knowledge and Ideas

Presentation of Knowledge and Ideas	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	39.0	50.0	
Median Age (months)	55.0	58.0	
No evidence	NA	NA	10
Uses gestures or sounds to communicate	100.0%	100.0%	19
Uses single words to communicate	95.8%	100.0%	28
Uses two-word phrases or signs	80.8%	100.0%	37
Uses simple phrases and sentences with simple grammatical rules	22.2%	71.3%	52
Uses varied grammar in expression	4.3%	12.3%	70
KG Standard: Shares information and ideas to describe, explain, predict (to be mastered by end of KG)	0.0%	4.1%	72

Appendix B: Mathematics and Spatial Reasoning, Full Frequency Percentages

Figure 15: ISTAR KR Counting and Quantity

Counting and Quantity	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	33.5	44.6	
Median Age (months)	55.0	58.0	
No evidence	3.6%	NA	4
Demonstrates awareness of the presence of objects	96.5%	100.0%	22
Identifies more	62.2%	91.0%	40
Uses numbers to compare	9.3%	53.3%	49
Names and orders quantities	0.7%	11.5%	61
KG Standard: Describes relationships between numbers and quantity (to be mastered by end of KG)	0.0%	0.0%	72

Figure 16: ISTAR KR Algebraic Thinking

Algebraic Thinking	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	39.4	53.9	
Median Age (months)	55.0	58.0	
No evidence	10.0%	1.6%	13
Manipulates objects for a purpose	90.0%	98.3%	31
Matches objects and sets	61.4%	86.0%	46
Makes a set of objects smaller or larger	5.0%	55.7%	64
Follows models of addition or subtraction situations	0.7%	4.1%	70
KG Standard: Describes the application of addition and subtraction to situations (to be mastered by end of KG)	0.0%	0.0%	72

Figure 17: ISTAR KR Time

Time	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	29.2	38.6	
Median Age (months)	55.0	58.0	
No evidence	6.4%	NA	13
Anticipates a routine	93.6%	100.0%	22
Uses vocabulary to identify events in a routine	55.0%	87.7%	34
Sequences events	8.6%	41.8%	46
Uses measuring vocabulary for time	0.7%	5.7%	64
KG Standard: Uses measuring units for time (to be mastered by end of KG)	0.0%	0.0%	72

Figure 18: ISTAR KR Location

Location	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	26.7	36.6	
Median Age (months)	55.0	58.0	
No evidence	1.4%	NA	7
Demonstrates an awareness of location of objects	98.6%	100.0%	19
Identifies location	67.9%	91.0%	25
Follows directions involving location	20.0%	63.1%	37
Communicates with location words	6.4%	18.0%	58
KG Standard: Uses prepositions to describe location (to be mastered by end of KG)	0.0%	5.7%	72

Figure 19: ISTAR KR Length, Capacity, Weight and Temperature

Length, Capacity, Weight and Temperature	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	32.2	42.7	
Median Age (months)	55.0	58.0	
No evidence	13.6%	0.8%	13
Explores measurement attributes	86.4%	99.1%	25
Distinguishes between big and little, hot and cold	67.1%	97.5%	37
Differentiates gradients of size and weight	6.4%	43.4%	49
Uses common measuring tools in correct context	0.0%	4.1%	70
KG Standard: Makes direct measurement comparisons (to be mastered by end of KG)	0.0%	0.0%	72

Figure 20: ISTAR KR Geometry

Geometry	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	32.2	44.5	
Median Age (months)	55.0	58.0	
No Evidence	15.7%	NA	10
Explores attributes (e.g. shape, size, color)	84.4%	100.0%	22
Matches same attributes	63.7%	93.5%	40
Matches opposites	5.8%	60.7%	46
Sorts and patterns by one attribute	2.9%	16.4%	58
KG Standard: Sorts and patterns by more than one attribute (to be mastered by end of KG)	0.0%	0.8%	72

Appendix C: Social and Emotional Development, Full Frequency Percentages

Figure 21: ISTAR KR Sense of Self and Others

Sense of Self and Others	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	38.8	50.9	
Median Age (months)	55.0	58.0	
No Evidence	NA	NA	4
Demonstrates self-awareness	100.0%	100.0%	22
Demonstrates independence	85.0%	99.2%	34
Engages with others	34.3%	86.9%	52
Demonstrates respect for self and others	5.7%	17.2%	60
Uses strategies consistent with children over the age of 5	38.8	50.9	

Figure 22: ISTAR KR Manages Emotions

Manages Emotions	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	31.2	43.8	
Median Age (months)	55.0	58.0	
No Evidence	2.9%	NA	4
Expresses a variety of emotions	97.2%	100.0%	10
Responds to a variety of emotions	79.3%	100.0%	28
Manages emotions with adult assistance	34.3%	71.3%	46
Uses strategies to manage emotions	6.4%	21.3%	60
Uses strategies consistent with children over the age of 5	31.2	43.8	

Figure 23: ISTAR KR Interpersonal Skills

Interpersonal Skills	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	32.0	42.6	
Median Age (months)	55.0	58.0	
No Evidence	NA	NA	7
Interacts with caregiver	100.0%	100.0%	13
Engages in parallel play	93.6%	100.0%	25
Interacts with others	48.6%	94.3%	40
Engages in cooperative interactions	4.3%	28.7%	52
Uses strategies consistent with children over the age of 5	32.0	42.6	

Figure 24: ISTAR KR Responsibility

Responsibility	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	32.6	41.9	
Median Age (months)	55.0	58.0	
No Evidence	NA	NA	7
Recognizes steps in familiar routines	100.0%	100.0%	19
Follows familiar routines	66.4%	97.5%	34
Follows rules	30.0%	64.7%	46
Applies rules to situations	2.1%	26.2%	48
Uses strategies consistent with children over the age of 5	32.6	41.9	

Figure 25: ISTAR KR Problem Solving

Problem Solving	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	31.6	44.1	
Median Age (months)	55.0	58.0	
No Evidence	14.3%	1.6%	7
Initiates an action to get a desired effect	85.7%	98.3%	22
Uses trial and error to manipulate objects	56.4%	84.4%	40
Searches for possible solutions	8.5%	39.3%	58
Finds alternative strategies and solutions	1.4%	4.1%	60
Uses strategies consistent with children over the age of 5	31.6	44.1	

Figure 26: ISTAR KR Approaches to Learning

Approaches to Learning	Pre-Survey (n=140)	Mid-Year (n=122)	Development (in months) when commonly demonstrated
Mean	30.7	42.2	
Median Age (months)	55.0	58.0	
No Evidence	9.3%	1.6%	4
Demonstrates curiosity	90.7%	98.4%	22
Sustains attention to preferred activities	52.1%	86.1%	40
Sustains attention to a challenging activity	6.4%	39.4%	52
Applies creativity to activities	2.1%	3.3%	60
Uses strategies consistent with children over the age of 5	30.7	42.2	