

Aligning the NWEA RIT Scale with the Wisconsin Knowledge and Concepts Exams

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Aligning the NWEA RIT Scale with the Wisconsin Standards Achievement Test (WKCE)

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Recently NWEA completed a project to connect the scale of the WKCE with NWEA's RIT scale. Six Wisconsin school systems participated in the study, using test information from a group of over 1,500 students enrolled in fourth, eighth, and tenth grade who took both the WKCE and NWEA tests in the fall of 2003. Information from these tests was used in a comprehensive study to identify the capacity of the RIT scale to predict success on the WKCE and to identify performance level scores on the RIT scale that would indicate a good chance of success on this test.

Three methodologies, linear regression, second order regression, and Rasch status on standards (called Rasch SOS) were used to derive estimates of cut scores. In each case the most accurate of the three estimates was used to arrive at the recommended cut score you see in this report. We estimated cut scores for each of the performance levels at grades four and eight. Because of the small number of participating students at grade 10 (n=122), we estimated only the cut score for "proficient" performance at that grade.

The findings from this study will be detailed in a more complete report to be published later this year, but the primary findings are as follows:

- WKCE and RIT scores correlate closely, with Pearson coefficients averaging over .82 in mathematics, .74 in reading, and .72 in language usage/writing.
- WKCE "proficient" performance can be predicted from RIT scores with nearly 90% accuracy in reading and about 85% in mathematics when both tests are administered during the same season.

Tables 1 through 3 summarize the RIT equivalent to each WKCE performance level. The table may be used to identify students who may need additional help to pass this assessment. We also estimated the minimum RIT scores students should achieve in the off-grades to be "on-track" to meet the same performance level in the next WKCE tested grade. These estimates were made using the appropriate RIT range growth norms.

The remaining tables and graphs show the proportion of students achieving various RIT score ranges who also achieved "proficient" performance on the WKCE. These tables can be used to assist in identifying students who are not likely to pass WKCE, thereby increasing the probability that intervention strategies will be planned and implemented. Because of the relatively small number of grade 10 students, we chose not to produce tables for that grade.

Contact John Cronin (503) 624-1951 at Northwest Evaluation Association if you wish further information or have questions about this study.

Table 1 – Best estimate of RIT scores linked to the performance levels on the WKCE – Reading (estimated cut scores for years not evaluated are in blue)

Reading to WKCE Reading				
Grade	Minimal	Basic	Proficient	Advanced
3	<160	160 (7)	177 (22)	193 (56)
4	<174	174 (8)	189 (24)	201 (54)
5	<179	179 (6)	199 (29)	210 (59)
6	<184	184 (5)	205 (31)	219 (70)
7	<187	187 (5)	210 (34)	224 (74)
8	<189	189 (5)	214 (34)	228 (74)
9			216 (32)	
10			217 (29)	

* associated fall percentile score from NWEA norms is in parentheses

Table 2 – Best estimate of RIT scores linked to the performance levels on the WKCE writing – Language Usage (estimated cut scores for years not evaluated are in blue)

Language Usage to WKCE Writing				
Grade	Minimal	Basic	Proficient	Advanced
3	<161	161 (4)	182 (24)	200 (69)
4	<174	174 (6)	191 (21)	208 (68)
5	<185	185 (7)	200 (25)	215 (70)
6	<194	194 (9)	207 (31)	220 (61)
7	<200	200 (12)	212 (36)	224 (75)
8	<204	204 (12)	216 (38)	227 (74)
9			218 (38)	
10			220 (39)	

* associated percentile score from NWEA norms is in parentheses

Table 3 – Best estimate of RIT scores linked to the performance levels on the WKCE – mathematics (estimated cut scores for years not evaluated are in blue)

Math to WKCE Math				
Grade	Minimal	Basic	Proficient	Advanced
3	175	175 (12)	185 (34)	198 (74)
4	<188	188 (15)	196 (33)	208 (74)
5	<193	193 (11)	201 (26)	214 (65)
6	<197	197 (11)	206 (26)	219 (60)
7	<201	201 (12)	211 (27)	224 (57)
8	<204	204 (10)	214 (23)	228 (50)
9			216 (22)	
10			217 (19)	

* associated percentile score from NWEA norms is in parentheses

Table 4 – Proportion of students passing the WKCE Reading based on fall RIT score - Reading

	Grade 4	Grade 8
160	0.00%	
165	60.00%	
170	33.33%	
175	42.86%	
180	63.33%	
185	75.00%	
190	81.82%	0.00%
195	92.00%	45.45%
200	97.10%	57.14%
205	99.08%	45.65%
210	100.00%	74.24%
215		87.50%
220		96.75%
225		98.60%
230		100.00%

Figure 1 - Proportion of students passing the WKCE Reading based on fall RIT score - Reading

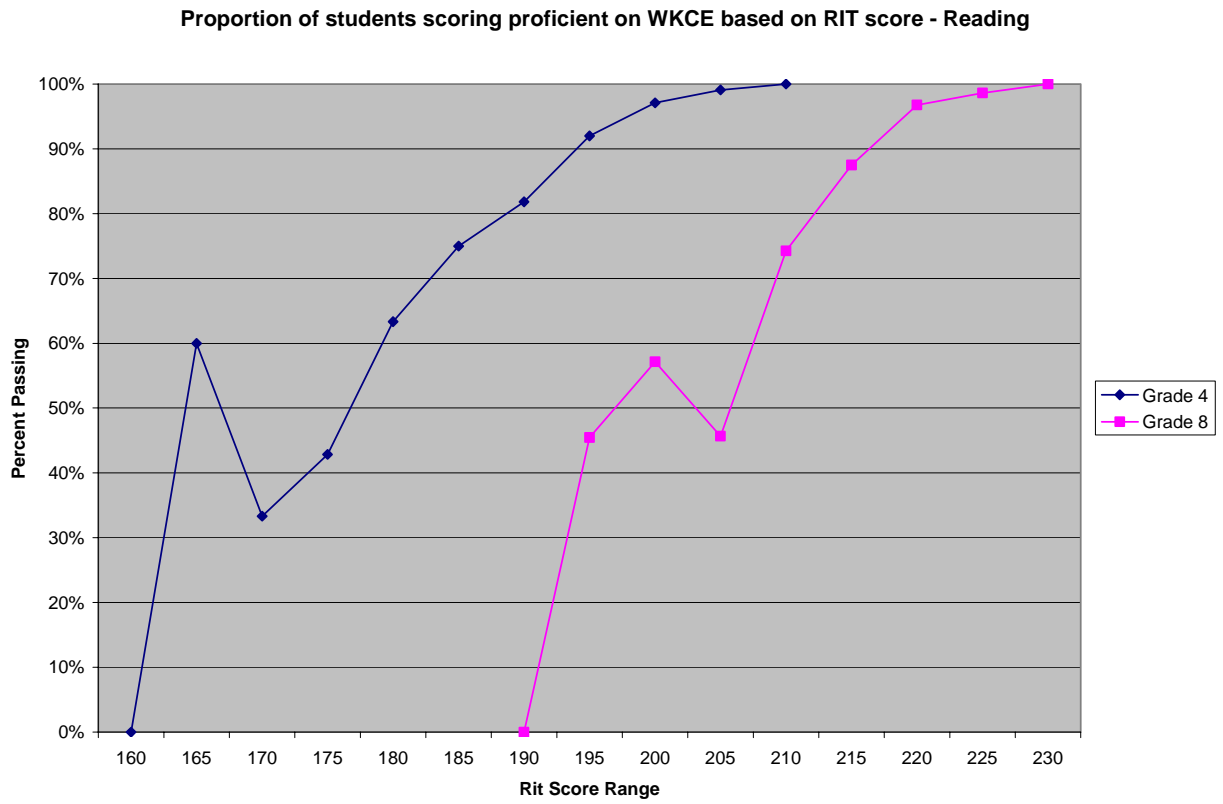


Table 5 – Proportion of students passing the WKCE writing based on fall RIT score – Language Usage

	Grade 4	Grade 8
160		
165	0.00%	
170	20.00%	
175	12.50%	
180	41.67%	
185	58.49%	33.33%
190	72.92%	33.33%
195	88.16%	20.00%
200	96.33%	23.53%
205	96.92%	48.72%
210	100.00%	66.67%
215		82.18%
220		96.18%
225		97.73%
230		99.25%
235		100.00%

Figure 2 - Proportion of students passing the WKCE Writing based on fall RIT score – Language Usage

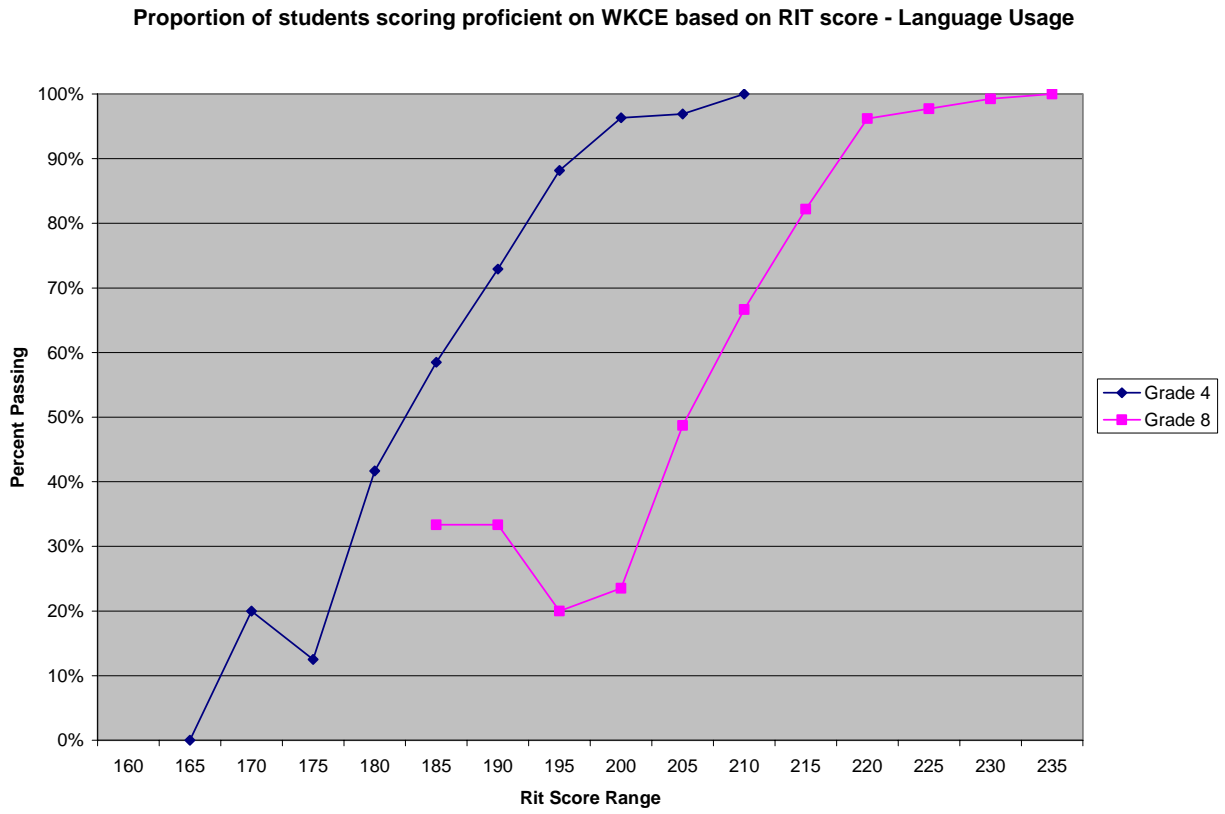


Table 6 – Proportion of students passing the WKCE Mathematics based on fall RIT score – Mathematics

	Grade 4	Grade 8
160	0.00%	
165	33.33%	
170	42.86%	
175	60.87%	
180	64.81%	
185	81.55%	
190	92.00%	0.00%
195	97.22%	30.00%
200	98.97%	50.00%
205	100.00%	43.48%
210		54.55%
215		74.47%
220		78.85%
225		88.64%
230		95.24%
235		96.40%
240		96.97%
245		97.47%
250		100.00%

Figure 3 - Proportion of students passing the WKCE Mathematics based on fall RIT score – Mathematics

