Reading Level Alignment

2021-04-18

Introduction

- Reading levels can be used to describe the reading ability of students, but they can also be used to determine the expected difficulty of texts (i.e. readability)

- When the reading levels are known for both students and texts - it is possible to assign texts that are easy enough so that they can read them, but hard enough so that they learn from them

- Reading texts at the right level is assumed to enhance learning in accordance with Vygotsky's theory of the zone of proximal development

The distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers." (Vygotsky, 1935)

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Determining Readability

- The readability of a text can be esitimated by determining the text complexity, for example by average sentence length, average word length, and word frequency level

- Older formula-based measures are the Flesch Reading Ease Test, The Flesch-Kincaid Grade Level Formula, or LIX (Läsbarhetsindex) for Swedish

- More recent tools use computers for analysis, for example Lexile® (MetaMetrics) or ATOS® (Renaissance Learning), but they still rely heavily on basic complexity factors

- Readability formulas can quantify some of the characteristics of text, but it is important to realize that the result is just an approximation and says nothing about the appropriateness of content

- Publishers of books for children and young adults may report readabilty scores in library systems for easy access by teachers
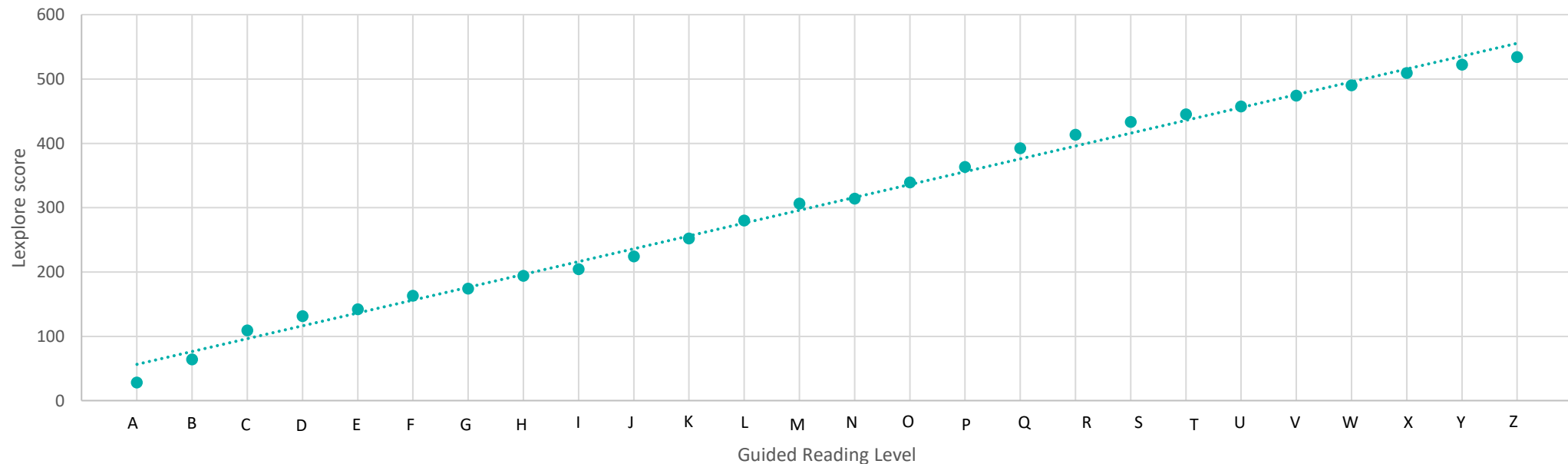
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Leveled texts

- A different approach is to author texts at different levels, usually following guidelines on type of content, graded vocabulary and linguistic difficulty

- Commonly used frameworks are Fountas & Pinnells Guided Reading Levels (Scholastic), Reading Recovery, Rigby PM Levels, or Stjärnsvenska (Liber) for Swedish

- The texts are usually proprietary and sold to schools either in paper booklets or digitial versions, often together with teaching material

- Leveled texts are usually available as both fiction and non-fiction and may also be aligned to national curricular standards such as common core

- Some publishers also provide reading levels for their books according to those of an existing framework or expressed as grade level equivalents

Aligning Lexplore to Reading Levels

- Readability is defined as the ease with which a reader can understand a written text, which is exactly what we measure with the Lexplore score

- Many readability formulas are aligned to grade level equivalents, which makes it possible to align the Lexplore score to existing tools

- Most frameworks for leveled texts are also aligned to grade level equivalents, which makes it possible to align the Lexplore score to existing publishers

- The Lexplore score may also be used for conversion between available readability formulas and levelling frameworks which may be beneficial for recommendations

- A benefit of aligning Lexplore to reading levels is that it may be possible to give better characterization of individuals and where they are at reading from existing frameworks
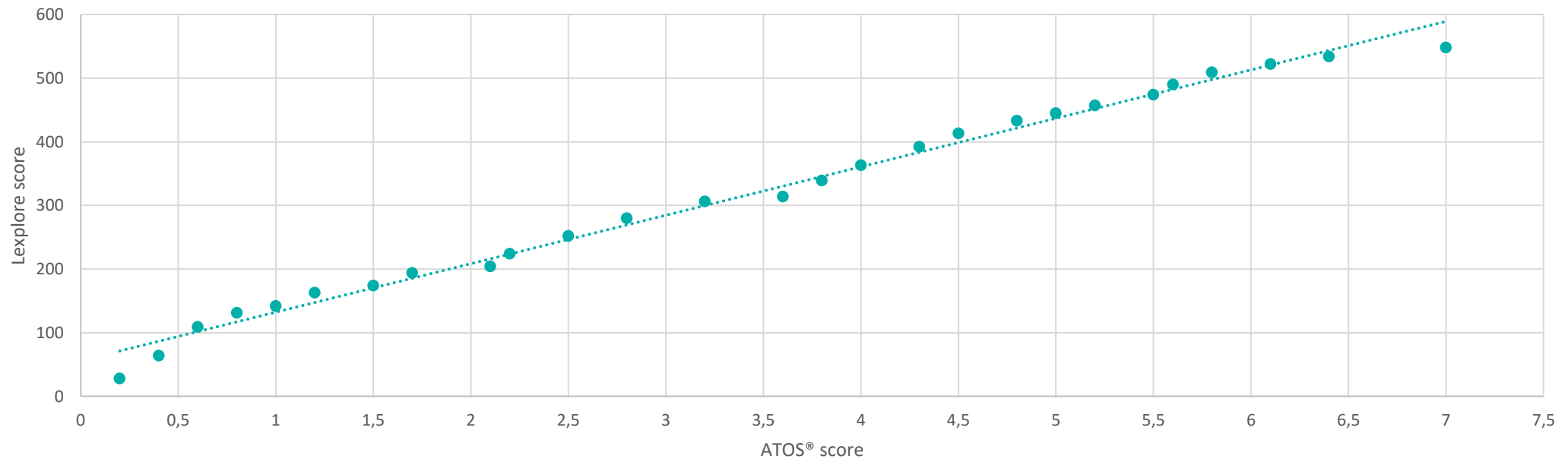
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Guided Reading Level

- Guided Reading Levels (expressed as A-Z) correlate very well with the Lexplore score through a basic linear transformation ($r^2 = .99$)
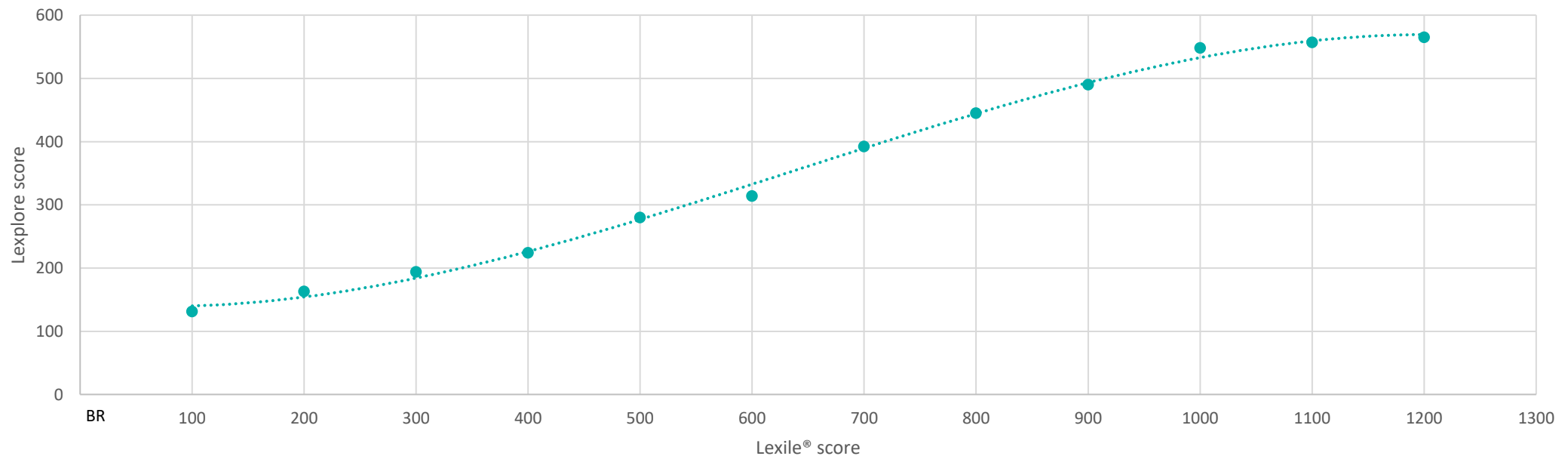
ATOS® Score

- ATOS® scores (expressed in grade level equivalents) correlate well with the Lexplore score through a basic linear transformation (r^2 = .99)

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Lexile® Score

- Lexile® scores correlate well with the Lexplore score through a polynomial transformation to adjust to the cumulative frequency distribution (r^2 = .99)

Lexplore logo

Summary

- By aligning the Lexplore score to existing reading level frameworks and readability measures we enable matching between the students reading ability and the text complexity

- We can transform the Lexplore score into Guided Reading Levels, ATOS® scores, and Lexile® scores with a high degree of confidence ($r^2 > .98$)

- By reporting results expressed in common reading levels and readability measures we make it easier to find relevant teaching material and appropriate support

- Through alignment with common reading levels it may be possible to give better characterization of individuals and where they are at reading from existing frameworks

- Providing conversions to some of the most common reading level frameworks and readability measures makes it easier to add additional conversions in the future

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Lexplore Score to Reading Level

Grade / Year	Grade Level Equivalent	Lexplore Score	ATOS Book Level	Fountas & Pinell Guided Reading Levels	Developmental Reading Assessment	Lexiles	Reading Recovery Progam	Rigby PM Level	Rigby Literacy Level	Oxford Reading Level	Oxford Book Band
K / 1	0	0	0,2	A	1	BR	A		1	3	Yellow
	0,2	28	0,3	A	2		B		2	4	Light blue
	0,5	64	0,4	B	2		1		2	5	Green
	0,7	87	0,5	B	3	70	1		3	6	Orange
	0,9	109	0,6	C	3		2		4	7	Turquoise
1 / 2	1	120	0,7	C	4		3 to 4	3 to 4 Red	5	7	Turquoise
	1,1	131	0,8 to 0,9	D	7	100	5 to 6	5 to 6 Red / Yellow	6	8	Purple
	1,2	142	1 to 1,1	E	10		7 to 8	7 to 8 Yellow	7	9	Gold
	1,4	163	1,2 to 1,4	F	10	200	9 to 10	9-10 Blue	8	10	White
	1,5	174	1,5 to 1,6	G	12		11 to 12	11-12 Blue / Green	9	10	White
	1,7	194	1,7 to 1,8	H	14	300	13 to 14	13-14 Green	10	11	Lime
	1,8	204	1,9 to 2,1	I	16		15 to 16	15-16 Orange	11	12	Lime +
2 / 3	2	224	2,2 to 2,4	J	18	400	17 to 18	17-18 Turquoise	12	8 – 9	Brown
	2,3	252	2,5 to 2,7	K	20		19 to 20	19-20 Purple	13	10 – 11	Brown
	2,6	280	2,8 to 3,1	L	24	500			14 to 15	12	Grey
	2,9	306	3,2 to 3,5	M	28			21 Gold	16 to 17	14	Grey
3 / 4	3	314	3,6 to 3,7	N	30	600			18	14	Grey
	3,3	339	3,8 to 3,9	O	34		22	22 Gold	19	15	Dark blue
	3,6	363	4,0 to 4,2	P	38			23 Silver	20	16	Dark blue
4 / 5	4	392	4,3 to 4,4	Q		700	24	24 Silver		16	Dark blue
	4,3	413	4,5 to 4,7	R	40			25 Emerald		17	Dark red
	4,6	433	4,8 to 4,9	S			26	26 Emerald		17	Dark red
	4,8	445	5,0 to 5,1	T	44	800		27 Ruby		18	Dark red
5 / 6	5	457	5,2 to 5,4	U	44		28	28 Ruby		18	Dark red
	5,3	474	5,5	V				29 Sapphire		19	Dark red
	5,6	490	5,6 to 5,7	W	60	900				20	Dark red
6 / 7	6	509	5,8 to 6,0	X			30	30 Sapphire			
	6,3	522	6,1 to 6,3	Y							
	6,6	534	6,4 to 6,9	Z							
7 / 8	7	548	7	Z+	70	1000	32,34				
	7,3	557				1100					
	7,6	565				1200					
8 / 9	8	574			80						
	8,3	580									
	8,6	584									
9 / 10	9	588									
	9,3	589									
	9,6	594									