When leveling helps, when it doesn’t, and how libraries can make the best of it

Lu Benke, M.A., M.A.L.S., and Jim Erekson, Ph. D.
Reading Levels are measured with computerized algorithms to estimate the readability of a text.

There are multiple leveling systems using such features as word length and sentence length as indicators of the difficulty in reading a text.
Reader level

Text level
## Commercial text-leveling programs applied to children’s books

<table>
<thead>
<tr>
<th>Name</th>
<th>Notation used</th>
<th>AKA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexile</td>
<td>BR300 – 2000L+</td>
<td>MetraMetrics; also used by Scholastic</td>
</tr>
<tr>
<td>Accelerated Reader</td>
<td>0.0-12.0</td>
<td>AR; ATOS, Renaissance Learning</td>
</tr>
<tr>
<td>Fountas &amp; Pinnell</td>
<td>aa-Z</td>
<td>Guided Reading</td>
</tr>
</tbody>
</table>

A few other systems used to assess a child's reading level/text:

- Reading Recovery (Benchmark Books)
- DRA (Developmental Reading Assessment)
- Degrees of Reading Power (DRP) – Questar
- Flesch-Kincaid (public domain)
Tell us your experience...

When hasn’t it worked?
Look familiar?

https://guides.turnitin.com/Revision_Assistant/Revision_Assistant_Curriculum_Resources/Lexile_Measures

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Problems with leveling

• Choice is not considered.
• Individual needs, backgrounds & interests are not considered.
• Professional judgment tends to be abandoned.
• Research supporting it is usually neither valid nor reliable.
• Puts emphasis on the text rather than the reader.
• Often used in competitive, judgmental, non-confidential ways.
What does research say about the effectiveness of leveling?

- Glasswell & Ford, 2011
  
  "Research has demonstrated that children can have less than successful interactions with at-level texts and sometimes more successful interactions with more difficult texts (Eldredge, 1990; Halliday, 2008; Stahl & Heubach, 2005; Kuhn, 2008)."

- Common Core (2010)
  
  "legitimate questions can be raised about the tools used to measure text complexity"
The history and imperfect science behind leveling

- Betts and IRI
- Edward Fry and Readability Graph
- Since then
Fry Graph for estimating Reading Ages (grade level)

Average number of sentences per 100 words vs. Average number of syllables per 100 words.
Average number of syllables per 100 words

Directions: Randomly select 3 one hundred word passages from a book or an article. Plot average number of syllables and average number of sentences per 100 words on graph to determine the grade level of the material. Choose more passages per book if great variability is observed and conclude that the book has uneven readability. Few books will fall in gray area but when they do grade level scores are invalid.

Count proper nouns, numerals, and initialization as words. Count a syllable for each symbol. For example, "1945" is 1 word and 4 syllables and "IRA" is 1 word and 3 syllables.

Example:

<table>
<thead>
<tr>
<th></th>
<th>Syllables</th>
<th>Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>First hundred words</td>
<td>124</td>
<td>6.6</td>
</tr>
<tr>
<td>Second hundred words</td>
<td>141</td>
<td>5.5</td>
</tr>
<tr>
<td>Third hundred words</td>
<td>156</td>
<td>6.9</td>
</tr>
<tr>
<td>Average</td>
<td>141</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Readability seventh grade (see dot plotted on graph)
How leveling came to dominate reading in schools

- Third grade research
- Standards based education
- Accountability based on standardized tests
- Wide shift from basal readers to children’s literature; whole language
- Marie Clay and Fountas & Pinnell
- Accelerated Reader
<table>
<thead>
<tr>
<th>STAGES OF READING DEVELOPMENT</th>
<th>GRADE LEVEL</th>
<th>BASAL LEVEL</th>
<th>GUIDED READING LEVEL</th>
<th>READING RECOVERY LEVEL</th>
<th>DRA LEVEL</th>
<th>LEXILE* LEVEL</th>
<th>AR LEVEL (ATOS)</th>
<th>LEXILE* RANGES TO CCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergent</td>
<td>R</td>
<td>1</td>
<td>A</td>
<td>1</td>
<td>A–2</td>
<td>0.2–0.4</td>
<td>0.2–0.4</td>
<td>MA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>2</td>
<td>1–2</td>
<td>0.2–0.4</td>
<td>0.5–0.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C</td>
<td>3</td>
<td>3</td>
<td>0.2–0.4</td>
<td>0.5–0.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D</td>
<td>4</td>
<td>4</td>
<td>0.2–0.4</td>
<td>0.5–0.9</td>
<td></td>
</tr>
<tr>
<td>Early</td>
<td>1</td>
<td>Pre-Primer</td>
<td>E</td>
<td>7</td>
<td>A–2</td>
<td>0.2–0.4</td>
<td>0.7–0.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primer</td>
<td>F</td>
<td>8</td>
<td>7</td>
<td>0.2–0.4</td>
<td>0.7–0.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grade 1</td>
<td>G</td>
<td>9</td>
<td>8</td>
<td>0.7–0.9</td>
<td>1.0–1.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>H</td>
<td>10</td>
<td>9</td>
<td>0.7–0.9</td>
<td>1.0–1.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>11</td>
<td>10</td>
<td>0.7–0.9</td>
<td>1.3–1.5</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>J</td>
<td>12</td>
<td>11</td>
<td>0.7–0.9</td>
<td>1.3–1.5</td>
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<td></td>
<td></td>
<td></td>
<td>K</td>
<td>13</td>
<td>12</td>
<td>0.7–0.9</td>
<td>1.6–1.9</td>
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<td></td>
<td></td>
<td></td>
<td>L</td>
<td>14</td>
<td>13</td>
<td>0.7–0.9</td>
<td>1.6–1.9</td>
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<td></td>
<td></td>
<td></td>
<td>M</td>
<td>15</td>
<td>14</td>
<td>0.7–0.9</td>
<td>2.0–2.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N</td>
<td>16</td>
<td>15</td>
<td>0.7–0.9</td>
<td>190L-330L</td>
<td></td>
</tr>
</tbody>
</table>


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Specific titles on different leveling systems
(If levels missing, that system did not rate that title.)

**Where the Wild Things Are**
- Guided Reading: J (grade 2)
- Lexile®: AD740L
- (Adult directed)s (gr. 2-5)
- DRA: 16 (grade 1)
- AR: Interest Level: Lower G – Book Level: (grade 3.4)
- Amazon: 4-8 yrs.

**Guinness Book of World Records 2015**
- Guided Reading: Y (grade 6)
- Lexile® Measure NC1330L (College)
- DRA 60 (grade 6)
- Amazon: NA

**Smile by R. Telgemeier**
- Guided Reading T (grades 5-8)
- Lexile® Measure GN410L (grade 2)
- DRA: 50 (grades 4-6)
- AR: - Interest L: Middle G
- Book L: (grade 2.6)
- Amazon: (8-12 yrs.)

**Twilight by S. Meyer**
- Guided Reading Z+ (grades 9-12)
- Lexile® Measure 720L (grades 2-3)
- AR: Interest L: Upper G
- Book L: (grade 4.9)
- Amazon: NA

[https://www.scholastic.com/teachers/bookwizard](https://www.scholastic.com/teachers/bookwizard)
Statement on Intellectual Freedom: Interpretation of the Library Bill of Rights

“The adoption, enforcement, or endorsement of any of these rating systems by the library violates the Library Bill of Rights....”

http://www.ala.org/advocacy/intfreedom/librarybill/interpretations/labelingrating
Viewpoint-neutral directional aid?  
Or prejudicial label?  
ALA/ALSC pros & cons on leveling

+ can be convenient aid for assisting library users and staff in finding and selecting desired materials.

- can pose a psychological barrier for users.

- does not respect the individual needs, interests, and abilities of users.

= valuable and convenient only if implemented in accordance with intellectual freedom principles.
A "running record" assessment allows for levels to be judged:

- First by parameters inside the reader rather than the text
- Using high-interest free choice text
- Based on the student’s actual reading of the text
- Rather than on statistical estimates

One way teachers assess a good fit for their students:

### Authentic Text Reading Record

<table>
<thead>
<tr>
<th>Page</th>
<th>Reading Performance</th>
<th>Miscues</th>
<th>Self-Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>S</td>
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<td>V</td>
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</tbody>
</table>

If a book of high interest is not within independent range for a reader?

- Keep the book, because interest identifies it as the reader’s target
- Use readability formulas to find books that meet the same interest with (on the whole) either shorter words, shorter sentences, or both.
- Can you do this with your existing librarian knowledge and skills, or do you need a leveling system to assist you?
Reader Levels: Have the reader do trial reading (authentic text or graded passages)

<table>
<thead>
<tr>
<th>Reader Level</th>
<th>Word Accuracy</th>
<th>Comprehension</th>
<th>Difficulty Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Level</strong></td>
<td>99% (90%)</td>
<td>Relatively easy</td>
<td>Relatively easy for reader</td>
</tr>
<tr>
<td><strong>Instructional Level</strong></td>
<td>95% (75%)</td>
<td>Challenging but manageable</td>
<td>Challenging but manageable for reader</td>
</tr>
<tr>
<td><strong>Frustration Level</strong></td>
<td>90% (50%)</td>
<td>Difficult text</td>
<td>Difficult text for reader</td>
</tr>
</tbody>
</table>

http://www.readingrockets.org/article/fluency-introduction
The children’s librarian’s standby...

The 5-finger rule

To find a good reading level, choose a book. Open to any page. Read it. On your hand, count the number of new words.

0-1 new words = too easy.

2-3 = This level is perfect!

4 = This is a “challenge” level. It is a little difficult. But you can try it if the book seems really interesting.

5 or more = Too difficult. If a book is too difficult, you probably won’t enjoy it.

www.ERFoundation.org

...but it’s not perfect.

Based on an idea from Hiebert & Reutzel, Revisiting Silent Reading, International Reading Association, 2010

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I PICK Good-Fit Books

I choose a book

Purpose – Why do I want to read it?

Interest – Does it interest me?

C omprehend – Do I understand what I am reading?

K now – Do I know most of the words?

Kelly Jordan 2011
Good to remember—

- High interest and background knowledge raise readers beyond tested levels. Assess these first using your professional knowledge and skills.
- No such thing as too easy.
- Word count for one page varies.
- Reading (aloud?) on demand could be stressful and affect performance.
Interest Inventories are known instruments for assessing student interests and background knowledge.

New strategies for Interest Inventories

Interest Inventories are known instruments for assessing student interests and background knowledge.
What’s a conventional Interest Inventory?
Because interests and background knowledge are known to impact student reading levels, we begin here.

New strategies for interest inventories (cont.)
Which kind of books do you like?

Scary stories  Funny  Animals  Science  Biography

Poetry  Fantasy  Gaming  History  Folktales

Sports  Books based on movies  World records & facts  Cartoons & Graphic Novels  Picture books

Jokes  Popular Series

Before using readability formulas or reader levels, do you already have 3-5 clearly identified interests for which you can supply multiple titles? If not, your levels will be off.

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Benefits to leveling
With AR, some schools began to encourage independent reading of authentic children’s literature rather than basals.
Leveling systems can provide valuable search and bibliographic tools and data on child interests.
Other benefits

• Find “just right book” by using *multiple* leveling systems.

• Educate yourself about text complexity, i.e., graphic novels.

• Check popular series on several systems to find comparable series.

• Ragnathan’s rule of saving the time of the reader may apply if intellectual freedom principles remain intact.

...it’s a tool.
Addressing leveling concerns from others

- Refer them to your library’s support of ALA Intellectual Freedom documents.

  ![Early Readers Collection](http://leveling.pbworks.com/f/DeerfieldPamphlet.pdf)

- Design your own simplified shelving system to meet user needs, but don’t call it “leveling.”
Addressing leveling concerns from others

• Downplay leveling competitions in the schools.

• If a child needs a leveled book but falls in love with an unleveled one, create an AR test for it! (Check with the school’s media specialist to get access.)

https://www.youtube.com/watch?v=Bbh99xull0w
Addressing leveling concerns from others

• Include rankings on catalog records only if several different leveling systems are included.

Don’t do it!!

• Share research on the problems with leveling, such as the statement from the founders of Fountas & Pinnell. (Many more in the handout!)
Common Core and other Reforms

• When national reform movements such as the National Reading Panel or the CCSS are first put forward, they often do succeed in capturing the complexity of reading.

BUT

• When people ask them to summarize or digest what is known for quick access in practice, whoever is doing it will either
  – Dumb down the research on the principle in question
  – Bury the complexity in appendices or long versions of the report.
Common Core and other Reforms (cont.)

SO

• In digestions, summaries and reviews of Common Core State Standards (Fordham Institute, Heibert, Krashen, Shanahan) policy makers have pushed teachers to increase complexity of texts students engage, and use leveling systems to make this happen.
Increase Flexibility in Assigning Book Levels using Common Core Rationale*

• According to CCSS research, **K–1 texts can’t be accurately leveled.**

• Non-standard prose such as **plays, interviews, poetry, recipes, or lists,** which all have non-standard punctuation, cannot be accurately processed by leveling systems.

• Research indicates that **informational texts** are generally **harder** to read than narratives.

• Reader and task considerations such as child’s **motivation,** knowledge, or experiences may warrant a higher or lower placement. Appraisal of the level is best done by **professional educators using their judgment,** experience, and knowledge of the child and subject.

Increase Flexibility in Assigning Book Levels using Common Core Rationale* (cont.)

• Qualitative dimensions of text complexity may ultimately overrule quantitative measures and place some texts at a higher level.

  • Texts with more complex structure such as those that use **flashbacks**, flash-forwards, **multiple points of view** and other manipulations of time and sequence

  • Texts with **figurative, ironic, ambiguous**, purposefully misleading, archaic, or otherwise unfamiliar **language**

  • Texts that make many **assumptions about the readers’ life experiences and depth of knowledge**

  • Texts with **multiple levels of meaning** (such as satires, postmodern picture books, texts contradicting the author’s literal message, etc.)
Thank you!

Any questions?

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Jim Ereksen – james.ereksen@unco.edu
References


When Leveling Helps, When it Doesn’t, and How Libraries Can Make the Best of It

At best, leveling books is another tool to help children choose “just right” books. At worst, it is an expensive product that labels kids, kills the joy of reading, and makes false promises to educators. This behind-the-scenes look at how leveling works can help us understand both what we can use in each leveling system and how to talk with educators and parents about avoiding the pitfalls.

Lu Benke, Ph. D. Candidate, School of Educational Psychology, University of Northern Colorado; James Erekson, Coordinator of Masters in Reading Degree Program, Associate Professor, School of Teacher Education, University of Northern Colorado

*Key for Competencies for Librarians Serving Children in Public Libraries

I: Commitment to Client Group
II: Reference and User Services
III: Programming Skills
IV: Knowledge, Curation, and Management of Materials
V: Outreach and Advocacy
VI: Administrative and Management Skills
VII: Professionalism and Professional Development
In summary,

1. Leveling takes a complex idea and makes it too simple.
2. Leveling takes a simple idea and makes it too complex.
3. Reading levels are not the same as reading needs.
4. Progress does not equal proficiency.
5. Readers have rights (as well as levels).

(Glasswell & Ford, 2011)