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Evaluating Computer Books With The Yawn Index

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EVALUATING COMPUTER BOOKS
WITH THE YAWN INDEX

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When I asked a reading specialist about her image of the connection between reading and computers in the classroom, she responded, "Children reading a green computer monitor." Grimacing, she added, "Personally, I prefer that they curl up with a good book than with a computer."

Other reading teachers think of teaching skills with computer drills or of heightening interest and comprehension with language games.

But another connection exists between computers and reading in the growing body of trade books on computers written for children. These books offer children a range of informational reading, discussing how computers work in society, relating computer history, or teaching children how to use computers.

I looked at 47 computer trade books published between 1984 and 1986 for elementary and middle school children. To evaluate these books, I used seven criteria which make up what I call the Yawn Index.

Some of the best books, described later, will keep children reading, and the results of the analysis suggest guidelines for trade books on computers. Here are the criteria.

The Yawn Index Criteria

1) BEGINNING--Does the beginning entice the reader? In the first few lines, readers often decide whether or not to read further. I wondered whether computer books begin with grabbers or favor dry beginnings such as, "There are five components to a computer" (yawn).

2) TONE--Does the tone invite the reader? The tone criterion examines how authors speak to the reader. For example, nonfiction authors can use "you" as a warm and

direct address to the reader or as a vague general reference (the type of "you" we discourage students from using in their writing).

3) LANGUAGE--Does the language enliven the topic? Language can delight or mystify. I looked to see whether the computer books offer good models of writing and avoid common stylistic weaknesses such as unnecessary passives, cliches, and overuse of "to be."

4) SELECTION--Is content well chosen? This criterion asks whether relevance to the book's purpose guides selection of material or whether facts seem arbitrary and unrelated.

5) ORGANIZATION--Is the organization logical? This criterion looks for a logical order which heightens interest and helps readers understand, as with a simple to complex sequence.

6) GRAPHICS--Do the visuals attract and clarify? Children's trade books generally use photographs, drawings, illustrations, or other visual aids such as boldface headings. This criterion is based on how well these visuals work to attract and inform.

7) STEREOTYPES--Does the book avoid stereotypes? In the prestige-ridden field of computers, sex or ethnic stereotypes are unforgivable--and boring. Illustrations of people and examples of people using computers, as well as personal pronouns, provide data for this criterion.

How Did They Do?

Each criterion is worth a point or a yawn. Yawns are worth nothing, and all-yawn books award readers with an instant nap. Best books garner seven points.

In the analysis, six (13%) of the books fall at the low end of the criteria scale, with zero to three points. Half (53%) fall mid scale with four to five points and some yawns. Many books (34%), however, say no to yawns, winning at least six of the points.

High and low point books show a clear difference on four criteria: Beginning, Tone, Language, and Organization. High ranked books' beginnings entice; lows do not. Highs

have warm conversational tones: lows are often didactic or commanding. Highs read pleasantly: lows ache with "it" and "was" and "there". One book typifies low ranked books by using "very" four times in 90 words. High books organize effectively; lows tend to scatter or repeat ideas, with little cohesion.

The selection criterion also distinguishes highs from lows, but with exceptions. Some dull books have excellent selection of information, just poor presentation. However, high point books offer an abundance of interesting material, while low point books more often list superficial facts without adequate detail.

More books score a point on graphics than on any other criterion. Few books mislead or confuse readers with obscure labels or with drawings that make little sense. Because the books generally do attract and clarify with visuals, the graphics criterion is least useful in evaluating the books.

Many books are big losers in stereotypes. Minorities rarely appear. In fifteen books (34%), males come out ahead on head counts of pictures, as much as 16 males to one female. What happened to the high percentage of real life programmers and computer users who are women?

Saying No to Yawns

Based on the Yawn Index, here are some good books for young readers.

Excelling on all seven criteria, Catherine O'Neill's Computers, Those Amazing Machines outdoes all the other books in graphics. Go through the spashy, varied pages of this National Geographic book once, just looking. Then read. What do these pictures have to do with computers? The child playing racquetball was born without a hand; now she has a computerized artificial one. Michael Jackson entertains on stage in two pages of red lights, in a computerized concert. A cosmetics artist applies makeup to a model's face on a computer monitor, while the model sits by. If the makeup is not right, the artist changes it ON THE SCREEN. This book varies its style, and not only with the pictures. The writing is anecdotal about how computers are used and more expository when describing how they work.

Melvin Berger's Computers: A Question and Answer Book succeeds with a different tack. Instead of stunning pictures, the pages show only print. But the attractive format pleases--boldface questions followed by answers in regular type. This compendium rewards the browser with computer tidbits. A chess Grand Master loses to a computer, a moth dies in a Harvard mainframe and gives birth to the term "debugging," and a computer helps a deaf person hear. For the young researcher who needs to find striking details quickly, Berger has provided an eight page index.

George Sullivan in Computer Kids introduces us to eight otherwise ordinary children who have excelled with computers--such as teaching younger children how to use computers or becoming rich and famous programmers. Sullivan writes readable accounts of each child and then quotes the children from interviews. Many of the children note the importance of books for learning at ages eight and nine. One of them says, "I'm mostly self-taught...most of what I know, I learned from books. As I read, I keep trying out things on the computer" (p. 82).

For middle school readers, David Taft's Computer Programming enlists fiction to teach BASIC. Sally and Sam have a problem. One of them has to go on a spacewalk, but neither wants to leave their ship. They have no coin to toss. Sally decides to write a random number program to replace the missing coin. Their adventures prompt a "Now try this" section on each page, with a short BASIC program to type into a computer and explanations of what the program means. Readers learn how to write simple programs in context of reasons for needing them.

Seymour Simon, with illustrators Barbara and Ed Emberley, has produced Turtle Talk for primary readers. This book on LOGO pulls off the daunting task of introducing a computer language in 32 pagaes. Angles and degrees mystify most primary children. Knowing this, Simon shows examples of not one but eight right angles on a page. To demonstrate what "wrapping around" means, a turtle walks up, around, behind, and below a computer to simulate what the cursor does when we cannot see it on the screen. Simon and the Emberleys have other top scorers with earlier books, How to Talk to Your Computer and The BASIC Book. Simon's

books begin with action and blend narration, dialogue, and exposition.

Don't miss Penny Holland's six books for young computer readers. The latest, Looking at Word Processing, begins with a limerick about a caveman. Illustrator Patti Boyd portrays this caveman writing his monumental work, "How I Made a Wheel," on a stone age computer. Children quickly learn that making changes with a word processor is easier than fixing mistakes carved in rock.

In all of her computer books, Holland presents activities to do, try, or make. These activities are carefully thought out to involve readers and encourage sharing. In Looking at Computers, children learn how to multiply by nine with their fingers as calculators. In Looking at Sounds and Music, they learn how to draw sound waves describing voice sounds. Best of all, children can have fun with Holland's books even without a computer around, because so many of the activities are child-centered rather than computer-dependent. For the teacher who wishes to teach reading, science, and computers but who has one computer for 30 children to share, Holland's books stretch a computer learning station.

Like Simon, Holland merges narrative with exposition. Tables of contents, glossaries, boldface technical words, and black and white photographs mix with warm language, colorful illustrations, and stories. The color reminds children of familiar storybooks, while the photographs resemble expository texts. The young reader who is more used to stories than exposition will feel comfortable with Holland's blend of nonfiction and fun.

Suggestions for Future Computer Books

The findings of the analysis suggest some directions for future books, based on the Yawn Index. Reading teachers can look for trade books which follow these guidelines

1) BEGINNING. Begin with a grabber. Set a purpose or interest for reading by involving children with action, narrative, dialogue, or a scenario.

2) TONE. Put young readers at ease. Speak warmly and directly to them. Make computers seem fun, and look for opportunities for amusing prose.

3) LANGUAGE. Make sure computer books are well

written, efficient, and lively. Explain vocabulary and help children pronounce difficult words. Most important, provide good models for children's own writing.

4) SELECTION. Choose child-oriented examples and analogies for clarity and interest, and take the time to explore and illustrate new concepts. Give readers what they need to know. Highly ranked books expect children to be DOING something to try out the concepts.

5) ORGANIZATION. If you have a detailed topic, provide an extensive index. When appropriate, order from simple to complex, with related activities. When the topic does not require a simple to complex organization, organize material in terms of interest: hook the reader by putting the more involving material first. Glue the whole together with references among the parts.

6) GRAPHICS. Refresh readers with drawings, photos, and illustrations. Break up pages to emphasize key ideas. Signaling can help, such as captions in boldface or in different colors. My favorite example of signals comes from Simon's How to Talk to Your Computer: to teach sequencing, a drawing of a peanut precedes each of the four steps for making a peanut butter sandwich.

7) STEREOTYPES. Encourage ALL students' interest in computers. Watch the photographs and pronouns and avoid pictures showing endless series of pale male facezzzzz.

Implications

This analysis of computer trade books suggests that-- not surprisingly--such books offer a range of quality to children. Some books will bore children, not only about computers but also about reading. Others will encourage children to curl up with a book, just as the reading special- ist wants. The Yawn Index can help teachers locate the interesting books.

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