



# The Children's eBook, Revisited

Presented by:  
Dr. Warren Buckleitner



SUNSET LAKE ELEMENTARY SCHOOL

Mr. Rycenga, Principal  
Mr. Buckleitner - Grade 6

1981 - 1982



EARLY EDUCATION AND DEVELOPMENT, 17(3), 489–505  
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# The Relationship Between Software Design and Children's Engagement

Warren Buckleitner  
*College of Education*  
*Michigan State University*

This study was an attempt to measure the effects of praise and reinforcement on chil-

THE NEW YORK TIMES MAGAZINE  
Personal Tech  
The Science of

# Web Video for Children (Parent

By WARREN BUCKLEITNER

If you still need convincing that the digital future has arrived, consider this: By the time you finish this article, at least 10 new hours of new video will be



Expert Guidance on Children's Interactive Media



# Children's TECHNOLOGY

www.childrenstech.com *Review*™

February 2011  
Volume 19, No. 2, Issue 131

**REVIEWS IN THIS ISSUE**

- 7 Wonderlicious Girls
- Alpha and Omega
- Alan's Greatest Hits: Volume 1
- Barbie Groom and Glam Pups
- Disney/Pixar Cars Toon: Mater's Tall Tales
- Donkey Kong Country Returns
- Game Party in Motion
- Grimm's Rapunzel - 3D Interactive Pop-up Book
- Hot Wheels Video Racer
- I Love You Through and Through
- James Bond 007: Blood Stone
- Kids Fireman
- Kindermusik Radio
- LettersAlive: Animals from Land to Sea
- Mavis Beacon Keyboarding Kidz
- MindSnacks Spanish
- My Reading Tutor
- My Underwear
- Nancy Drew: The Model Mysteries
- Nelson Tethers Puzzle Agent
- NGP (Next Generation Portable)
- Nintendo 3DS
- Oregon Trail (for Facebook)
- Penguins of Madagascar; The Pictionary
- Plants vs. Zombies DS
- PokéPark: Pikachu's Adventure
- Shawn Johnson Gymnastics
- Sing-a-ma-jigs Duets
- Sweet Talkin' Ken
- Toontastic
- TouchMaster: Connect
- Vinci Tab
- Yogi Bear: The Video Game (DS)

LittleClickers: Learn about Teeth



Price: \$24/year for 12 PDF issues  
<http://childrenstech.com/subscribe/>



Turn your iPad into a puppet show, with ToonTastic (p. 13).

Put your voice into Ken's plastic soul (p. 12), and your eyes in a Hot Wheels car (p. 15).

Portable gaming takes shape with the soon to be released 3DS, and Sony's NGP (p. 5).



Sweet Talkin' Ken, p. 12



Nintendo 3DS, p. 18



Sony NGP (Working Title) p. 17



Apple iPod Touch 4th Generation

Expert Guidance on Children's Interactive Media



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March 2011  
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**REVIEWS IN THIS ISSUE**

- Air Hogs Hyperactive
- Air Hogs R/C Pocket Copter
- Air Swimmers
- Body and Brain Connection
- Brain Buddy Plush Remote
- Interactive DVD Set
- Buckyballs
- Capture Cam
- Disney Channel All Star Party
- Dragon Quest VI: Realms of Revelation
- Gummy Bears: Gummy Ear Buds
- InnoPad
- LeapPad Explorer
- LEGO Star Wars III: The Clone Wars
- LittleBigPlanet 2
- Magic School Bus, The: Oceans
- Mario Sports Mix
- Pac-Man Party
- Plants vs. Zombies DS
- Rock Star Mickey
- Smart-e-Dog
- Smart Pants School
- Speed Slider
- Spy Net Video Watch with Night Vision
- Square of Life
- Steel Diver
- TeachTown: Basics 2.0
- Tetris Link
- TNT Reading
- Vtech Peek at Me Bunnies

LittleClickers.com: Toys, p. 4

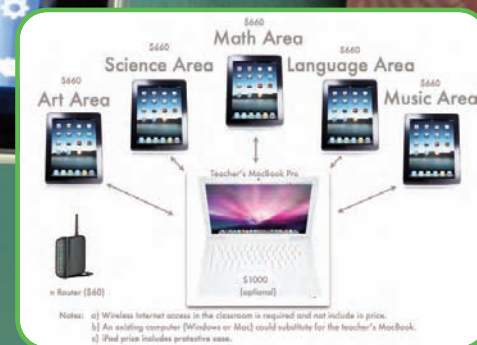


Price: \$24/year for 12 PDF issues  
<http://childrenstech.com/subscribe/>

**SETTING UP A**

## Multi-Touch Preschool

- ✓ 8 Steps to Get Started
- ✓ Security & Safety
- ✓ Apps for each part of the room
- ✓ How to manage iTunes



[www.childrenstech.com](http://www.childrenstech.com) Password for March: SAMIAM





SPARTANS  
MICHIGAN







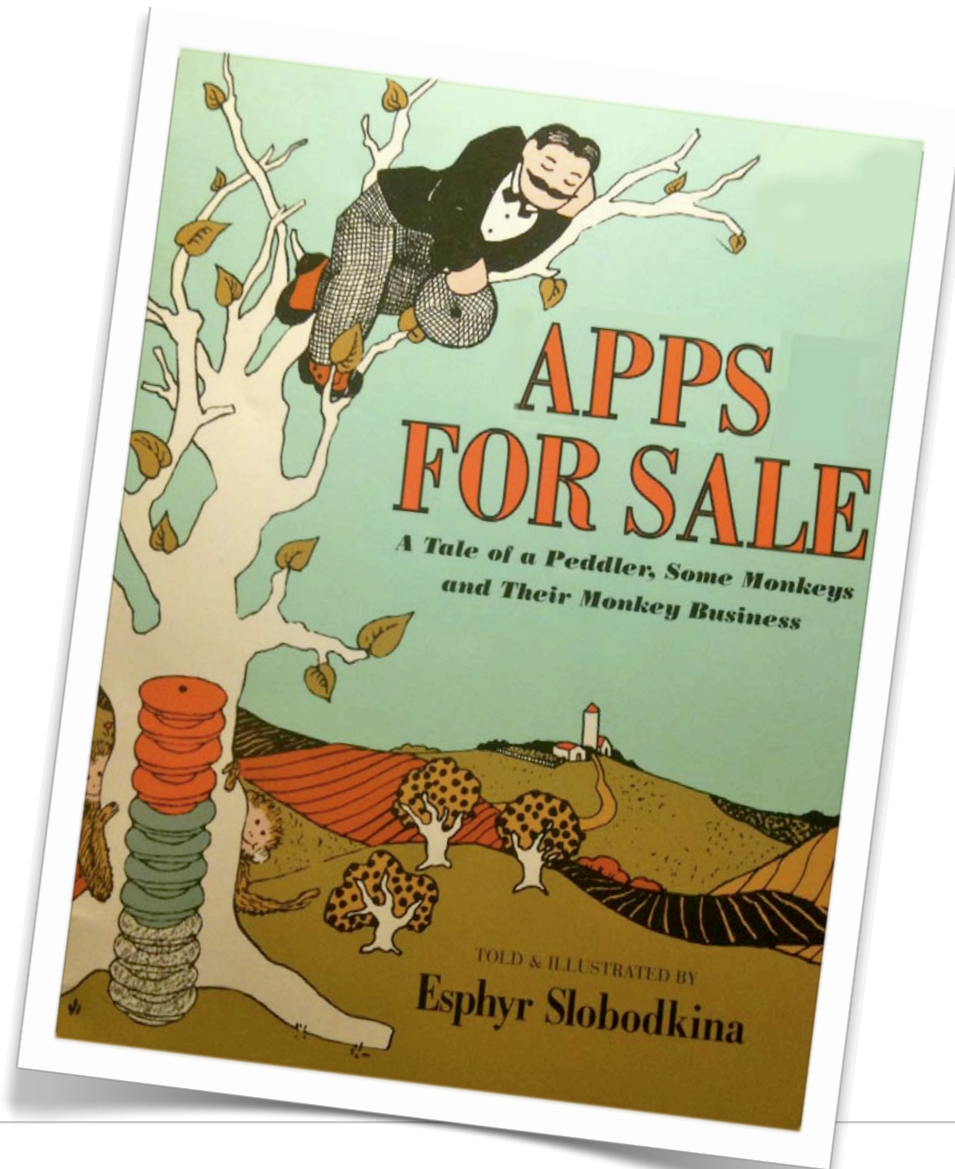


# Agenda

1. What is an eBook? How do you find out?
2. Attributes of quality
3. Examples, of both dust and magic
4. Lunch!



# 1. What is an eBook?



Once upon a time, eBooks came on shiny CD-ROMs. Educators were excited! For the first time, you could click on a word to hear it read aloud!



Just Grandma and Me, Brøderbund Software, 1993





# View it from a theoretical framework: What each say about eBooks?

Lev Semenovich  
**Vygotsky**  
(1896-1934)



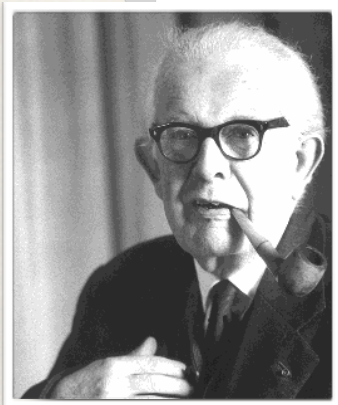
Maria  
**Montessori**  
(1870-1952)



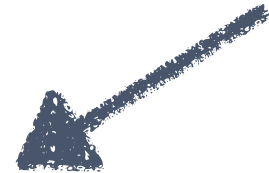
**BF Skinner**  
(1904-1990)



**Jean Piaget**  
(1896-1980)



Text

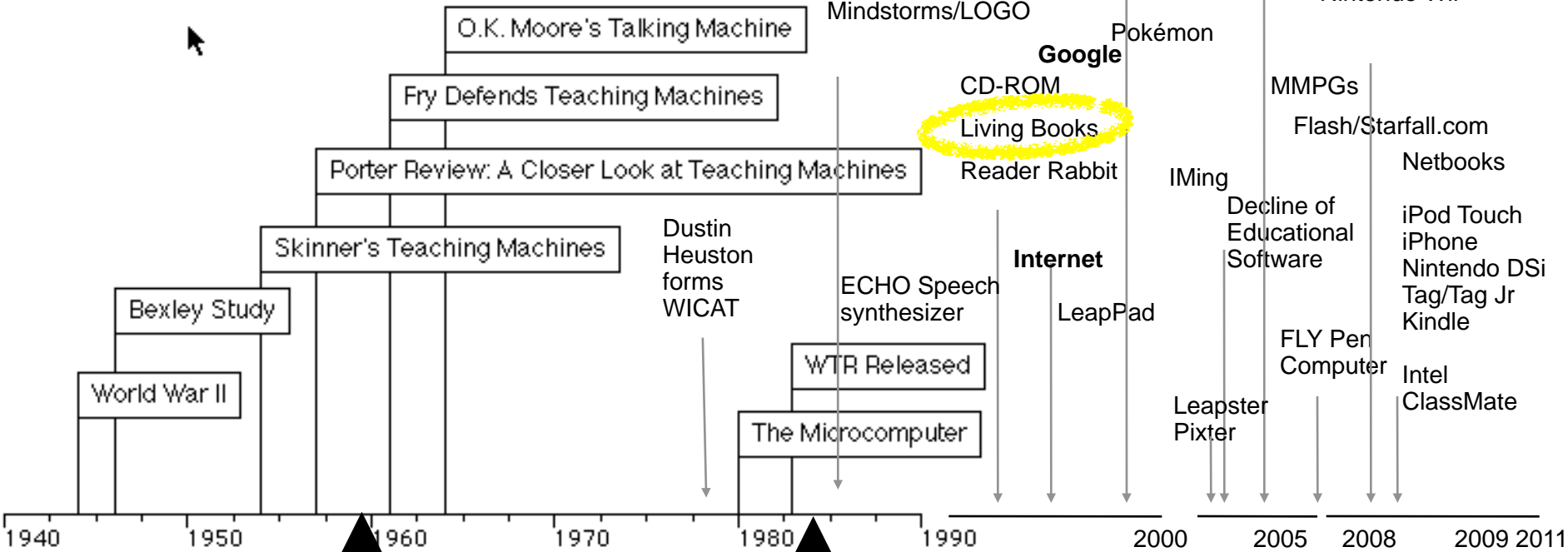


# View it from Moore's Law

# An Amazing History!

## Moore's Law Meets Literacy — Some Key Events

Source: Children's Technology Review database -- see complete references at <http://www.childrensoftware.com/articles/history.tech.literacy.html>





# Hardware

Children's "eBooks" seem to have a chicken/egg relationship with the evolution of microprocessor-related technologies (Moore's Law).

1998



2008



2010



# 500 Internal Server Error

Sorry, something went wrong.

A team of highly trained monkeys has been dispatched to deal with this situation.

Also, please include the following information in your error report:

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**Recent discovery --**  
**How computers really work!!!**



# Lighter, thinner, faster and with cameras.

*A new pipeline to a child's mind."*

Four pillars of the iPad:

1. Multi-touch

2. 10 hour batteries

3. Internet

4. 13,000 Apps and  
an army of programmers



"The iPad is the computer we always wanted."  
Ann McCormick, Founder  
The Learning Company



C.E.O.: GATES

BALLMER

'90 '95 '00 '05 '10

**MARKET CAP**  
in billions



C.E.O.: SCULLEY

SPINDLER

AMELIO

JOBS

COOK (interim)

JOBS

# Know what an eBook isn't



# Children's eBook Continuum

PDF → Electronically delivered books → animations → popup → Kinect/3DS

Less interactivity

More interactivity

**Think of an “eBook” as a messy continuum between less and more interactive**

**Think of every book as a script.**

Confused? Watch the constants! 1. Moore's Law (hardware), 2. your theoretical framework, and 3. “child reality” (e.g., stages of growth). Mix these with the overarching culture of business and human activity. These things will help you understand eBooks.

children's

# EREADERS

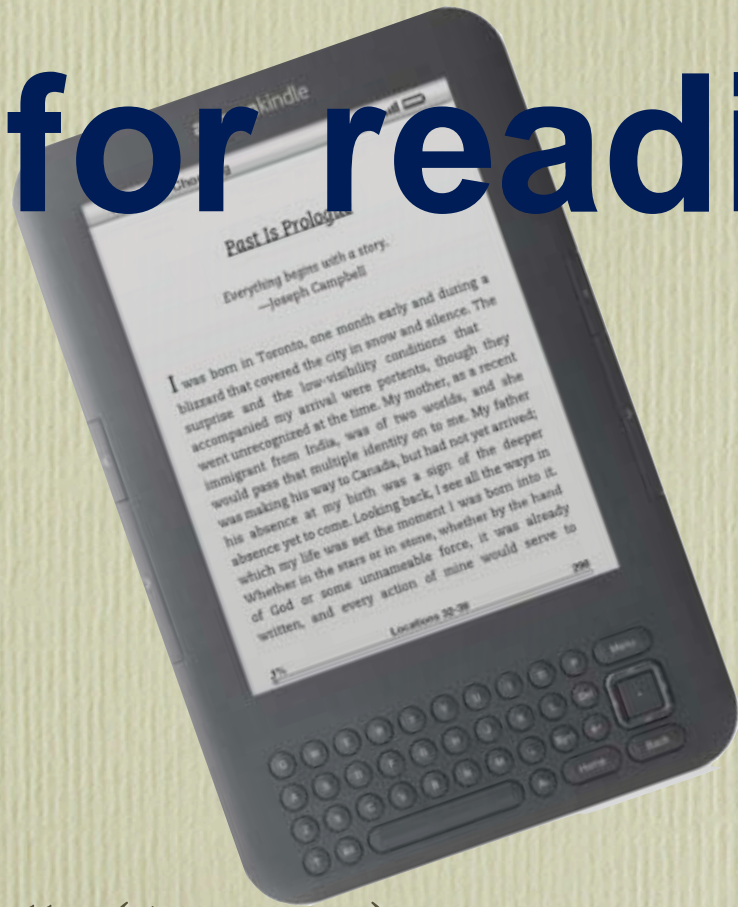
^

Definition: Non-interactive, technology enhanced presentations of a children's story:

- \* Font control (color, shape & size)
- \* Navigation helpers (tilt control, page swiping, screen rotation)
- \* Decoding helpers (narration, word highlighting, word search, pronunciation, language toggling)
- \* Minimal frosting (e.g., hidden animation or activities) or social features.
- \* Cheaper to produce and publish.



# One trick ponies: for reading



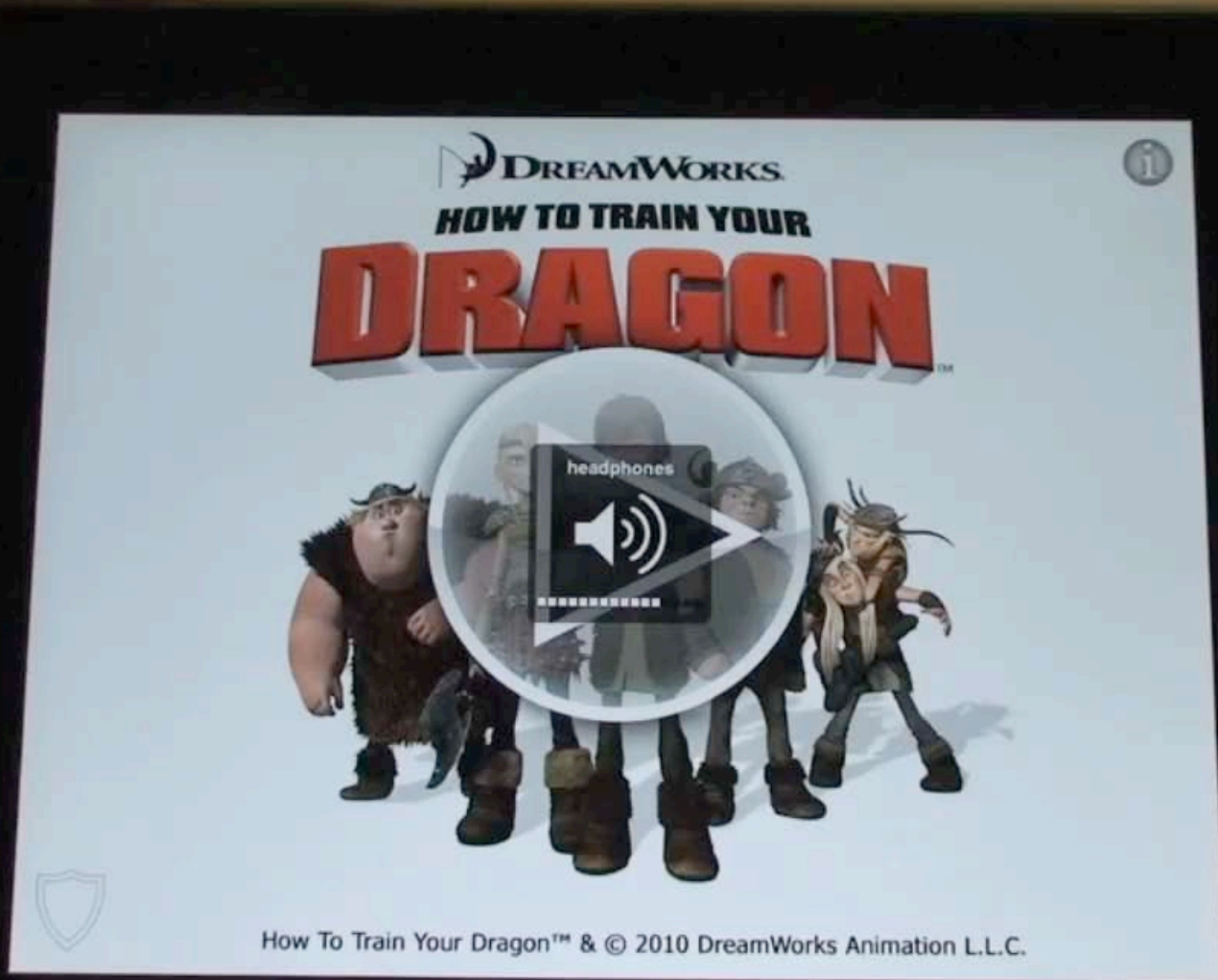
Kindle (Amazon)

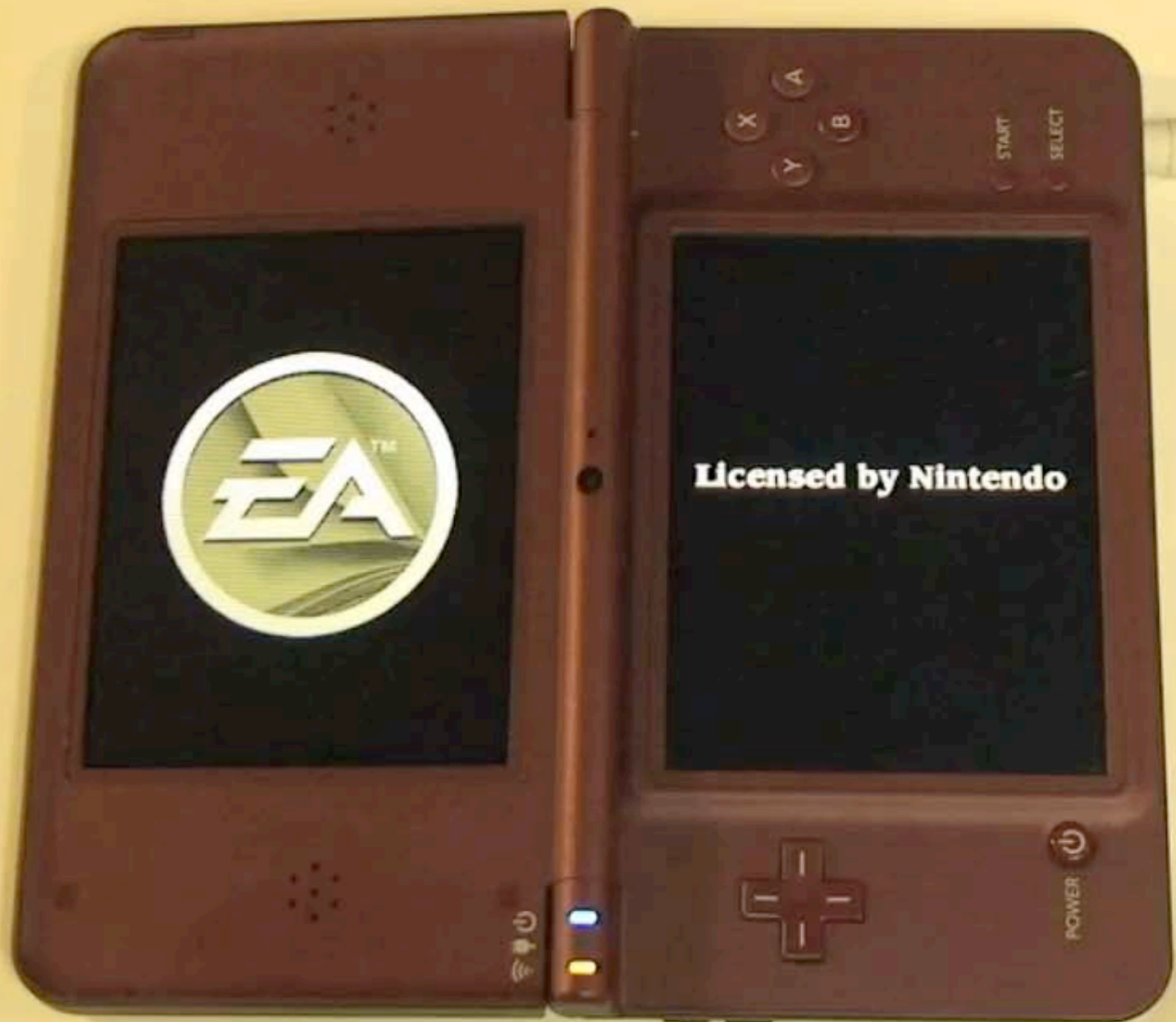
Nook Kids (bn.com)

Sony Reader Pocket Edition

# HOW TO TRAIN YOUR DRAGON HD

<http://www.youtube.com/watch?v=mE8EIwJnLbM>



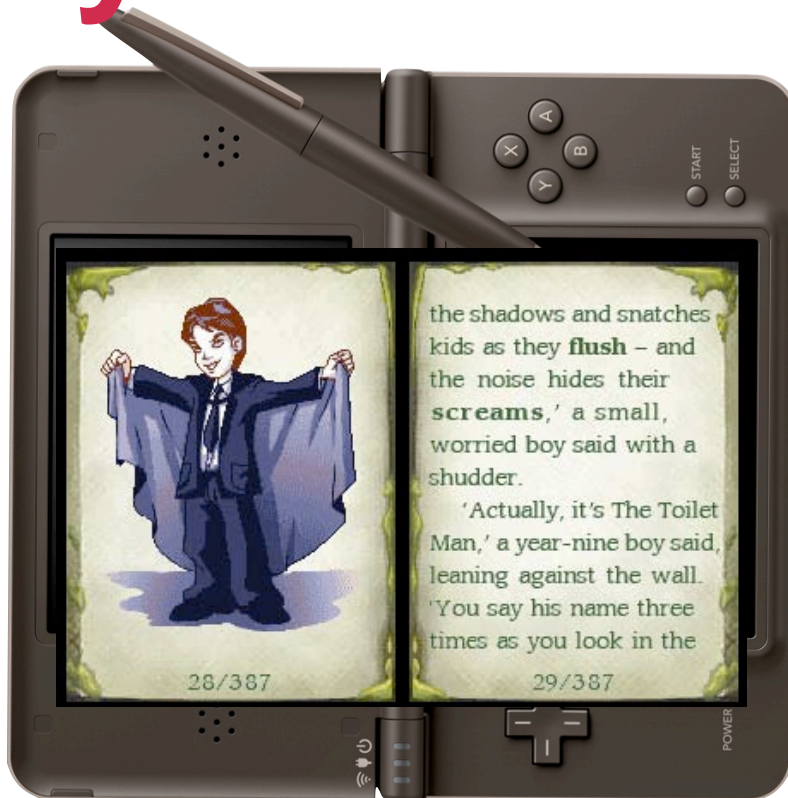


Licensed by Nintendo

# Beyond the Tablet

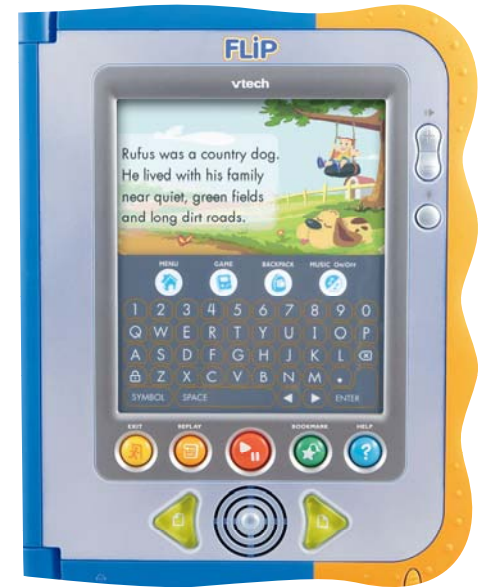


Tag Reading System



FLIPS The Bubonic Builders, Electronic Arts

VTech  
V.Reader



Leapster Explorer  
(coming this fall)

InnoPad from V.Tech (coming this fall)

# Google's Android



Motorola XOOM (top)  
Samsung Galaxy Tab (right)

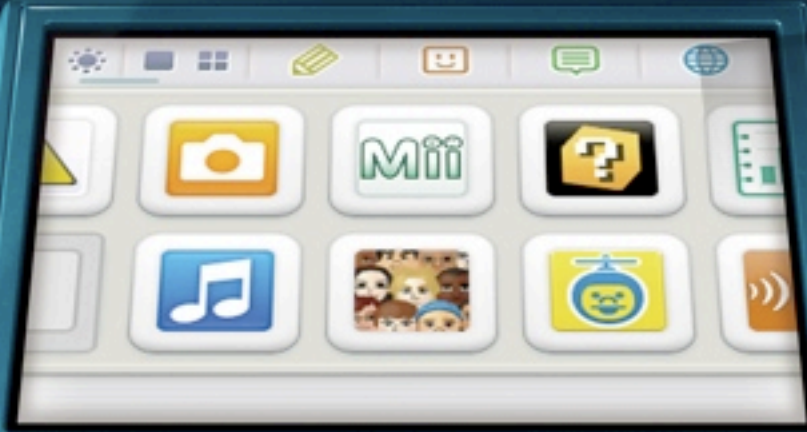




NINTENDO 3DS

3D

OFF



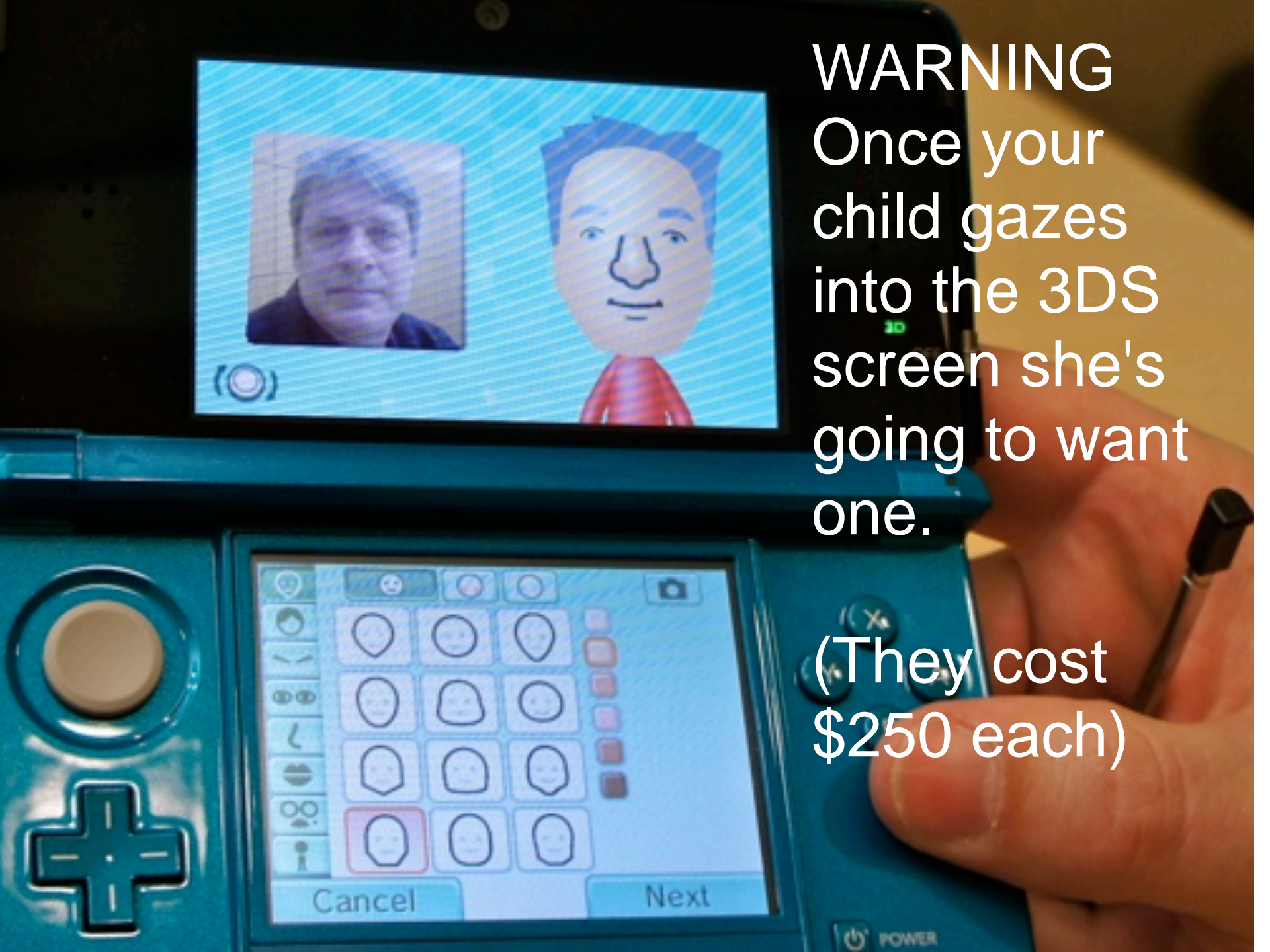


2D image of Nintendo 3DS game

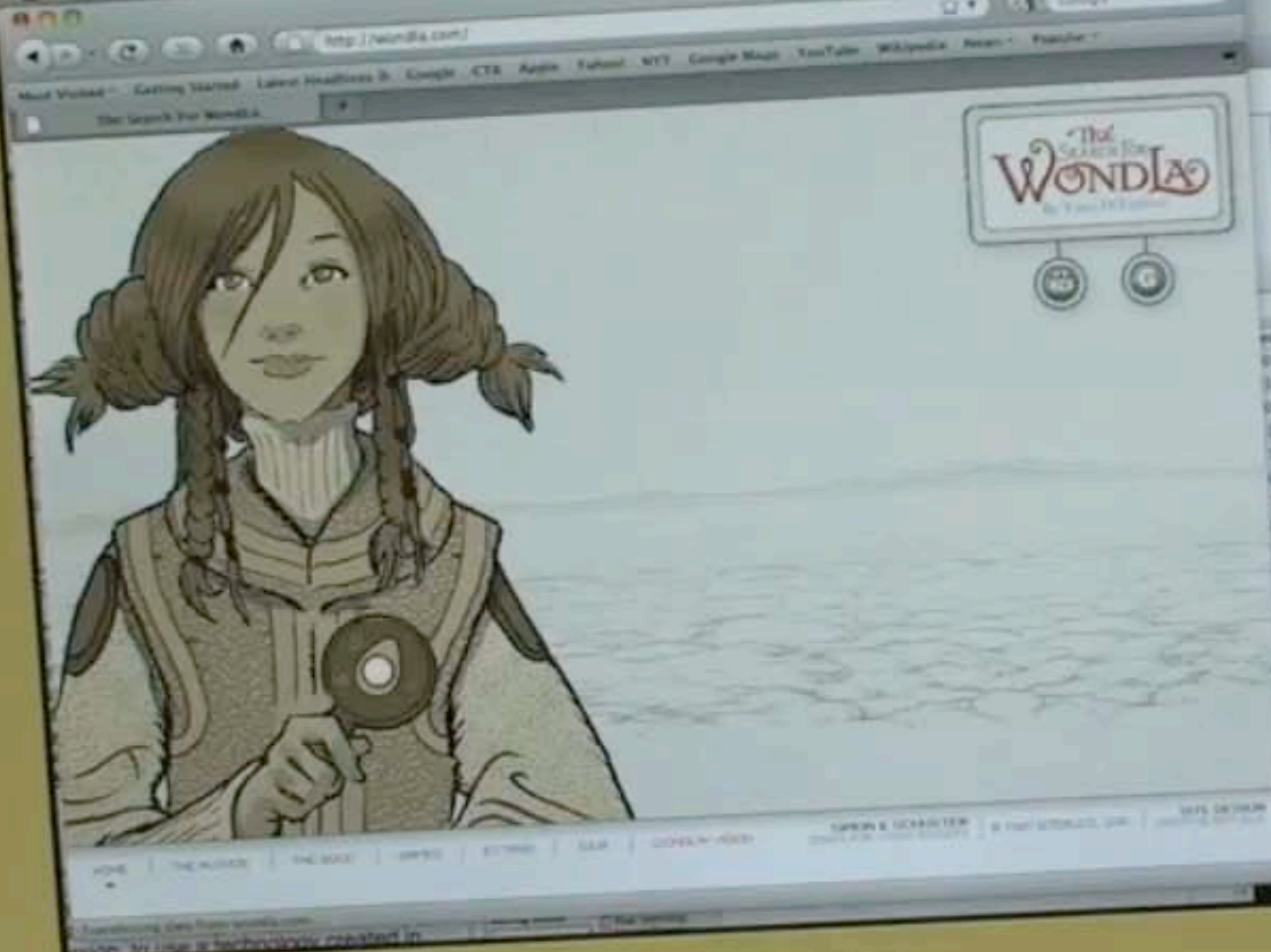


**WARNING**  
Once your child gazes into the 3DS screen she's going to want one.

(They cost \$250 each)







MacBook

$$4 - 1 + \square = 11$$



What is the future  
of the book?



Photo source: [www.britannica.com](http://www.britannica.com)

# How they view one another

## Britannica says this about Wikipedia

Although some highly publicized problems have called attention to *Wikipedia's* editorial process, they have done little to dampen public use of the resource, which is one of the most-visited sites on the Internet. ... (71 of 1507 words)



**Wikipedia**, free Internet-based encyclopaedia, started in 2001, that operates under an **open-source** management style. It is overseen by the nonprofit Wikimedia Foundation. *Wikipedia* uses a collaborative software known as **wiki** that facilitates the creation and development of articles.

Although some highly publicized problems have called attention to *Wikipedia's* editorial process, they have done little to dampen public use of the resource, which is one of the most-visited sites on the Internet. ... (71 of 1507 words)

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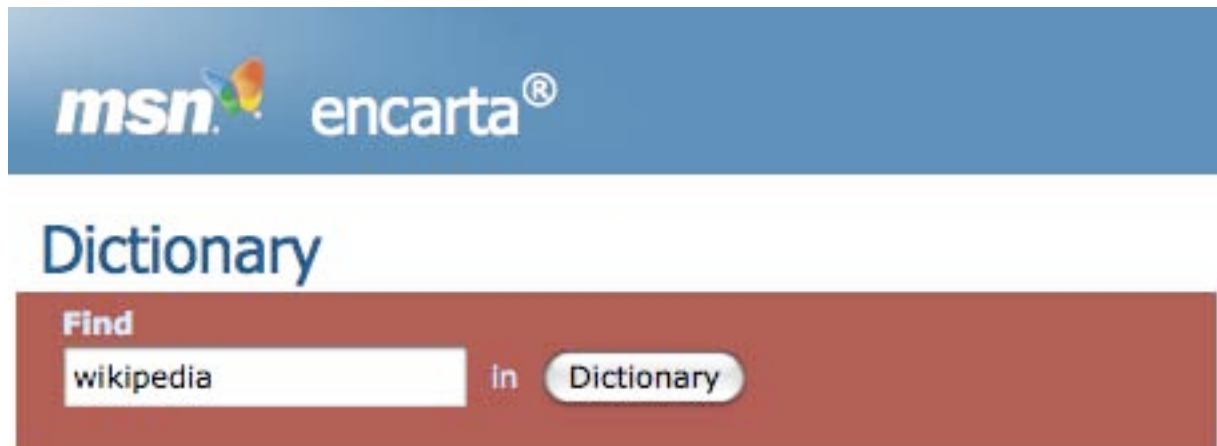
A credit card is required to validate your free trial. You will not be charged during your free trial, and you can cancel at any time. If you decide not to cancel your membership, your service will continue at **\$103.48** for your first year and renew after that year for the then-current rate annually.

## Wikipedia says this about Britannica



The *Britannica* has had difficulty remaining profitable.<sup>[3]</sup> Some articles in earlier editions have been criticised for inaccuracy, bias, or unqualified contributors.<sup>[5][9]</sup> The accuracy in parts of the present edition has likewise been questioned,<sup>[1][10]</sup> although criticisms have been challenged by *Britannica's* management.<sup>[11]</sup>

# Search “wikipedia” with Encarta’s Dictionary...



# Dictionary

Find

wikipedia

in

Dictionary

Dictionary

Thesaurus

Translations

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



wiggy

wight

Wight, Isle of

wiglet

wigmaker



No results found  
"wikipedia"



Look at a **lot** of all kinds of interactive (IM) products, and construct your own definition of “**dust**” and “**magic.**”



Observe **real** children.





# Animated ebooks

Definition: Interactive experiences inspired or based on a children's story.

- The book plus frosting
- Two modes (commonly): Read to Me or Read it Myself
- Extension activities such as a jigsaw puzzle, coloring book pages
- Decoding helpers (dictionary, sound it out, word highlighting and language toggles).

# Taxonomy of Touch

Jean Piaget  
(1896-1980)

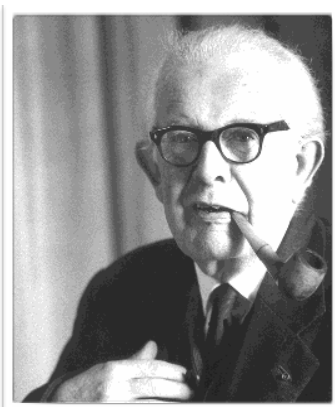


Table 1: A Taxonomy of Multi-Touch Interaction Styles, by Stage

Age and Stage	Intentional Touch-Related Behaviors	Motion/Voice Behaviors	Examples
<b>Birth - 24 months</b> <b>Sensorimotor</b>	<ul style="list-style-type: none"> <li>• Mouth</li> <li>• Bump/Swat</li> <li>• Kick</li> <li>• Jab/poke</li> <li>• Smear</li> <li>• Grasp</li> <li>• Swipe, dig or scoop</li> <li>• Swipe directionally (up, down, left or right), e.g., to turn pages or change photos.</li> <li>• Single tap/ single touch with coin-sized icons</li> </ul>	<ul style="list-style-type: none"> <li>• Jolt</li> <li>• Shake</li> <li>• Feel the vibration from the iPad's speaker</li> <li>• Rock</li> <li>• Blabber</li> <li>• Lean (whole body)</li> <li>• Sit</li> <li>• Throw</li> <li>• Single word commands</li> </ul>	<p>Look for apps that deliver high cause/effect ratios. These are also called "busy box" apps, "interactive play doh" or rattles. These experiences can empower a child, letting them bang on a keyboard <a href="http://bit.ly/bMgr2">http://bit.ly/bMgr2</a>, pop bubbles, or make waves in a pond. Show children where the "change app" button is, so they can get out of what they get into.</p>
<b>2 to 5</b> <b>Preoperational</b>	<ul style="list-style-type: none"> <li>• Scribble <a href="http://bit.ly/aXqFur">http://bit.ly/aXqFur</a> or finger paint.</li> <li>• Touch and use BB-sized icons</li> <li>• Slide objects (with thumb or finger)</li> <li>• Flick and throw (skeeet ball, a shooting gallery)</li> <li>• Trace</li> <li>• Cut or slice</li> <li>• Alternate hands (e.g., on a piano keyboard)</li> <li>• Press and hold (e.g., as a timer fills)</li> <li>• Double tap</li> </ul>	<ul style="list-style-type: none"> <li>• Tilt to steer (like a steering wheel)</li> <li>• Align camera viewfinder</li> </ul>	<p>This is the age when a child's motor abilities start to catch up with his or her cognitive abilities. They can find and touch smaller icons, do dot-to-dot puzzles and control things by shaking or tilting the screen. They start to employ their emerging temporal and spatial thinking abilities in their iPad interactions.</p>
<b>5 to 12</b> <b>Concrete Operational</b>	<ul style="list-style-type: none"> <li>• Spread out (with thumb and index finger, going in different directions)</li> <li>• Pinch in (with thumb and index finger)</li> <li>• Press soft, press hard</li> <li>• Rotate</li> <li>• Hit the target</li> <li>• Push a magnet (like herding cats)</li> <li>• Two or more combination movements, like tilt and shoot.</li> </ul>	<ul style="list-style-type: none"> <li>• Balance (tilt) like a plate</li> <li>• Jump to hop, while throwing a ball (with a tap).</li> </ul>	<p>By the time they are reading, children are ready to fully explore the iPad's multitouch screen, working in concert with the microphone and accelerometers.</p> <p>Prior experience will increase confidence.</p>
<b>12 - up</b> <b>Formal Operational</b>	<ul style="list-style-type: none"> <li>• Isometric rotation (both fingers move the same distance, in the same or opposite direction).</li> <li>• Simultaneous rotation, such as with a compass (hold thumb in one space, and rotate other finger).</li> <li>• Augmented reality camera based applications such as a virtual planetarium <a href="http://bit.ly/17w96B">http://bit.ly/17w96B</a></li> </ul>	<ul style="list-style-type: none"> <li>• Children can start to use the compass, and conceptualize the accelerometer.</li> </ul>	<p><b>If your goal is to develop a proficient iPad user, provide plenty of exposure to a variety of apps.</b></p>

See also: Yahoo's Nate Koechley's "Taxonomy of Touch" talk on slideshare  
<http://www.slideshare.net/natekoechley/taxonomy-of-touch>

# Techniques

When Beatrix Potter wrote and illustrated **The Tale of Peter Rabbit**, she insisted upon using color illustrations, pushing the limits of the current technology. Today, as you read this, future Beatrix Potters are working on a next generation of children's storytelling, made possible by a new 800 lb gorilla in children's publishing -- the iPad (see the Table "Eight Pillars of the iPad"), and devices like it. The clear multi-touch screens can display colors that Potter could've only fantasized about.

Things will only get more interesting when the wave of Android-based tablets, and their associated apps, become better developed and start trying to catch up to Apple.

We're looking forward to reviewing these products, and learning more about how this technology can be used to for the benefit of children, and a happy ending.

# The art of story extension

- ebooks provide a context to apply reading skills as well. Children can record their own narration for a page in Disney's Toy Story Apps. Their voice is played back over the stories' orchestrated sound track, which can be very empowering.
- It has become common to include story-related activities such as jigsaw puzzles, dot-to-dot puzzles, mazes, racing games and coloring. When used well and embedded in the context of the story, they can increase engagement. If used haphazardly, they can blur the experience and decrease engagement.

# Scaffolding Techniques

## New Scaffolds For Learning to Decode

These aren't just bells and whistles. Some of these techniques have significant pedagogical implications, and when paired with a web connection, could be used for assessing and diagnosing a child's developing abilities. Decoding helpers (dictionary, sound it out, word highlighting and language toggles) can help a struggling reader make meaning out of confusion. There are also implications for language translation; for the first time, a publisher can create a product where geography is no longer limited to one region, culture or language group.

Here are some text decoding techniques:

- Touch an object to hear it labeled.
- Touch an object to see its word label
- Touch a word to hear it read aloud.
- Touch a word to see it sounded out.
- Touch a sentence to hear it read in a natural rhythm.
- Drag over a paragraph to hear it read aloud.
- Let children write.

### What kind of text—

*You can use text as a teaching tool for scaffolding. The effective uses of simple predictable text, transitional text, decodable text, easy readers, and authentic literature are highlighted here.*

### For whom and when? Textual scaffolding for beginning readers

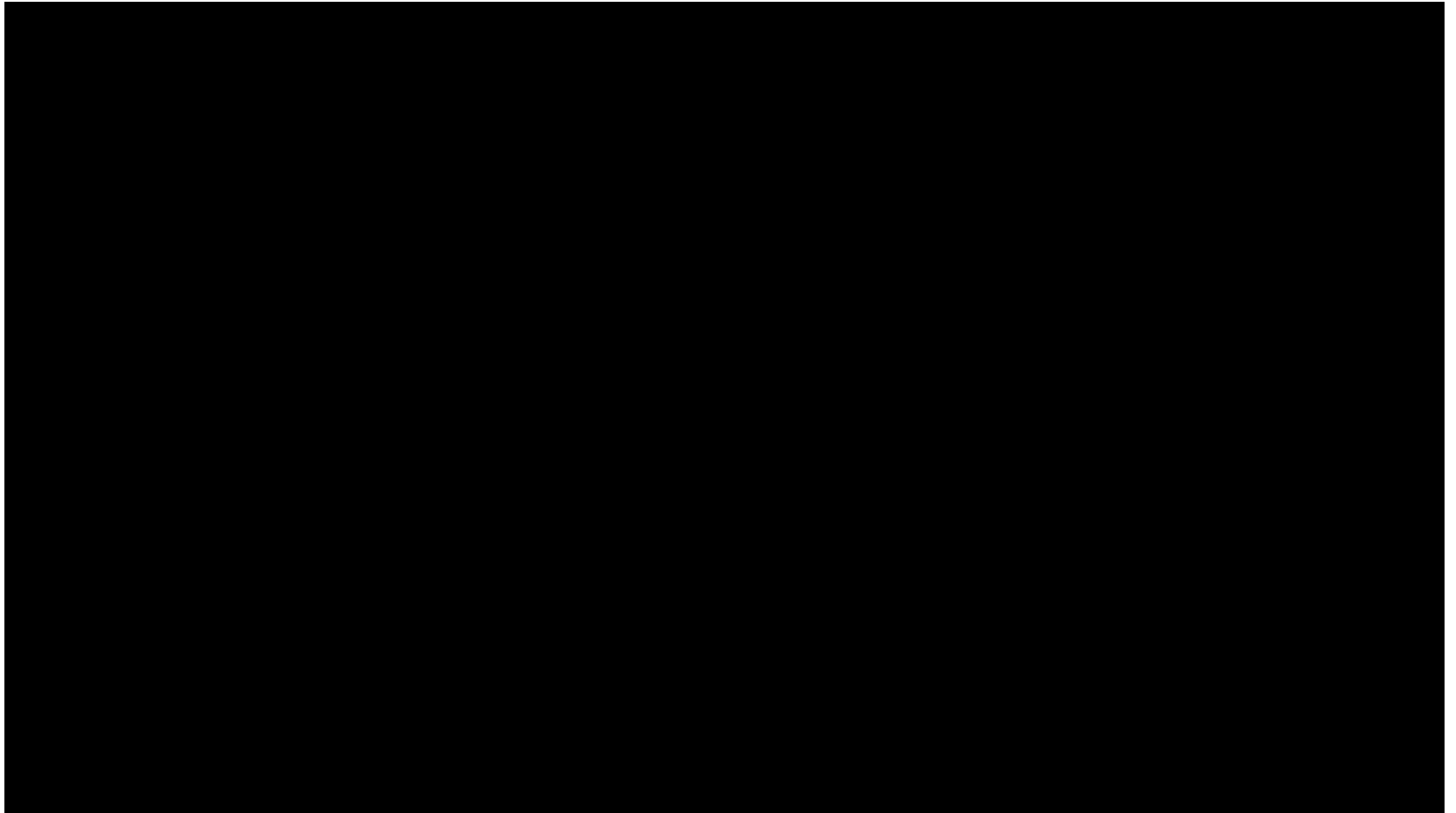
Which kind of text is best for beginning readers? Growing numbers of teachers are asking this question with increasing urgency. In response, supporters of particular types of text often square off in acrimonious debate, with each side touting its choice as most appropriate for beginning readers. Some advocate predictable text that emphasizes rhythm, rhyme, and repetition. Others advocate decodable text with its emphasis on common letter-sound relationships. Still others contend that beginning readers should read primarily authentic literature. When the question is framed this way, it sets up a forced choice: If one text is chosen, then the others must be rejected.

ture students' new abilities and promote continuing progress. I suggest that we view text in a similar way. As students make progress as readers, teachers should provide text that supports and extends that progress.

Viewed this way, text becomes an instructional tool known as scaffolding. Scaffolding has theoretical roots in both cognitive psychology and social constructivism (Bruner, 1986; Govelek, 1986; Langer, 1984; Palincsar, 1986; Scardamalia, Bereiter, & Steinbach, 1984; Tharp & Gallimore, 1988). In the classroom, scaffolding may take the form of modeling, thinking aloud, reminding, and coaching (for a review of these teaching actions, see Roehler & Duffy,

# Sebastian's Tail

<http://www.youtube.com/watch?v=iZ2KEjXPIEg>



Kiwa Media

# Story Extensions

Some ebooks provide a context to apply reading skills as well. Children can record their own narration for a page in Disney's Toy Story Apps, for example. Their voice is played back over the stories' orchestrated sound track, which can be very empowering.

It has become common to include story-related activities such as jigsaw puzzles, dot-to-dot puzzles, mazes, racing games and coloring. When used well and embedded in the context of the story, they can increase engagement. If used haphazardly, they can blur the experience and decrease engagement.

# Assessment

These aren't just bells and whistles. Some of these techniques have pedagogical implications, and when paired with the Internet, could be used for assessing and diagnosing a child's progress.

- Recording audio samples over time.
- Tracking time on task.
- Progress reporting.
- Changing reading difficulty, on the fly.
- Asking children to read for meaning, and measuring the result.



# Common Multi-touch Interactive Techniques

- **Hot spots.** The original technique works great on an iPad screen, now that finger tips have replaced mice.
- **Swipe.** It's the first thing a preschooler does to a screen these days, and there are fingerprints as proof. It can be a smear, or a rub, but in the end, it is a child's first effort to see if the screen is alive.
- **Hunt and find.** Because of high resolution screens, it is possible to create experiences with a great deal of visual detail. This is why we've seen such an expansion in this hunt and find genre, with titles that include I SPY, Highlights Hidden Pictures, Where is Waldo and more. Consider the hint system, and find out smartly it handles random guesses.
- **Tilting.** Motion-based input is generally of three varieties: leaning (front to back), tilting (left to right) and shaking. The lean means moving the screen from side to side, steering wheel style. Tilting means moving the top of the screen toward you or away from you. It can be used to "steer" a flying object, or direct a falling leaf to the ground. Shaking can be used to trigger a screen event and/or sound, turn a page, or change a song. This last technique can be used in tandem with a traditional control.
- **Mechanical Metaphors** such as pull **tabs** work wonders on an iPad screen. In Nash Smasher, children must pull virtual tabs and turn dials to make things happen.
- **Pinch and spread.**
- **Painting** or coloring, including smart coloring.
- **Unpainting** or uncovering.



*Just a spoonful of sugar helps  
the medicine go down  
In a most delightful way*

EARLY EDUCATION AND DEVELOPMENT, 17(3), 489–505  
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# The Relationship Between Software Design and Children's Engagement

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This study was an attempt to measure the effects of praise and reinforcement on chil-

$$e = sf^2$$

e = engagement of child

s = story's developmental match with the  
child (abilities and prior experience)

f = features (or frosting)

# Evaluation Instrument

Children's Interactive Media Evaluation Instrument, Adapted for Ebooks

KEY: A = Always, equals 1 point. SE = some extent = .5, N = never, or 0 points. NA means "not applicable"

I. EASE OF USE (Can a child pick it up and make it work? Does it enhance feelings of control?)

A SE N NA

1 \_\_\_ \_\_\_ \_\_\_ The experience starts quickly with a minimal introduction that can be skipped.

2 \_\_\_ \_\_\_ \_\_\_ There is an obvious path to the first page.

3 \_\_\_ \_\_\_ \_\_\_ The experience feels crisp and responsive, enhancing a child's feelings of control.

4 \_\_\_ \_\_\_ \_\_\_ Pages are easy to turn or flip, forward or backward.

5 \_\_\_ \_\_\_ \_\_\_ Page turn icons are easy to spot.

6 \_\_\_ \_\_\_ \_\_\_ A "return to main menu" icon is easy to spot.

7 \_\_\_ \_\_\_ \_\_\_ It is easy to jump to another page, anywhere in the ebook.

8 \_\_\_ \_\_\_ \_\_\_ If there is a "read to me" mode, it is easy to stop and get back to the main menu to turn it off (you don't feel trapped).

9 \_\_\_ \_\_\_ \_\_\_ It is easy to adjust the sound.

II. EDUCATIONAL VALUE (What does the child walk away from the experience with, that he/she didn't have when he/she came to the experience?)

1 \_\_\_ \_\_\_ \_\_\_ Embedded reinforcements are used, to support the story or the learning.

2 \_\_\_ \_\_\_ \_\_\_ The challenge level can be adjusted.

4 \_\_\_ \_\_\_ \_\_\_ Games and animations support the story.

5 \_\_\_ \_\_\_ \_\_\_ Language enrichment techniques are used.

6 \_\_\_ \_\_\_ \_\_\_ If the title is a reference, there is an index and the ability to search by keyword.

7 \_\_\_ \_\_\_ \_\_\_ A child can record their own narration.

8 \_\_\_ \_\_\_ \_\_\_ Labeling is clear and directly linked to the finger touch.

9 \_\_\_ \_\_\_ \_\_\_ There are ways for a child to represent their experience, e.g., through creative expression.

IV. ENTERTAINMENT VALUE (How "fun" is the experience?)

1 \_\_\_ \_\_\_ \_\_\_ Hot spots provide surprises.

2 \_\_\_ \_\_\_ \_\_\_ Children will want to return to the experience.

3 \_\_\_ \_\_\_ \_\_\_ There's enough content to keep a child interested.

4 \_\_\_ \_\_\_ \_\_\_ There's enough challenge.

V. FEATURES (Consider the current "state of the art" in children's ebook design)

1 \_\_\_ \_\_\_ \_\_\_ Fonts are easy to read.

2 \_\_\_ \_\_\_ \_\_\_ Text is narrated, and if possible, sounded out.

3 \_\_\_ \_\_\_ \_\_\_ Bookmarking is used, so a child can come back the same point where he/she left off.

4 \_\_\_ \_\_\_ \_\_\_ It is possible to save your work.

5 \_\_\_ \_\_\_ \_\_\_ Language translation features are available.

6 \_\_\_ \_\_\_ \_\_\_ Sounds, such as page flips, can be turned on or off.

7 \_\_\_ \_\_\_ \_\_\_ It is easy to flip a page forward and backward.

8 \_\_\_ \_\_\_ \_\_\_ You know how "thick" the "book" is. There is some indication of how many pages are in the book, or how long the story is.

9 \_\_\_ \_\_\_ \_\_\_ Music can be easily toggled on/off, and doesn't invade a child's imagination.

10 \_\_\_ \_\_\_ \_\_\_ In-app sales, if used, can be locked away from a young child.

11 \_\_\_ \_\_\_ \_\_\_ External links are limited to the "about us" menu.

12 \_\_\_ \_\_\_ \_\_\_ Credits identify the publisher, author, narrator and producing studio, along with a physical address and valid contact information.

IV. VALUE (Rate the ebooks value, comparing competitive products)

1 = Low

10 = High

\_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_ \_\_\_  
1 2 3 4 5 6 7 8 9 10

Buckleitner, W., (2011). Children's Interactive Media Evaluation Instrument, Adapted for Ebooks. Children's Technology Review, January 2011, Vol 19, Issue 130.

<http://childrenstech.com>.

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# To help you remember....



# Elements of Quality

Easy to use

Makes you feel powerful quickly -- starts quickly, responsive, reversible, Minimum User Competency (MUC) is below child's developmental level, can jump around between pages, over the shoulder help, minimal or no instructions

Educational

You walk away with something valuable; a skill or competence you didn't have when you came to the experience.

- language
- math/logic
- art/music
- science
- social
- geography

Entertaining

Challenging, novel, full of discoveries, social

Features

Preferences let you customize. If it is free, you can lower your expectations.

Value

What does it do vs. how much does it cost?

# COMMON MISTAKES

“You can’t make a good salad with soggy lettuce.”

## CONTENT

- This is a BAD story to start with, e.g. the Dick and Jane syndrome.
- Bad sound. Amateur hour narration, low quality music, bad mixing.
- Bad graphics. Either low quality or “author-centric” and not meaningful to a child.

Font too small on the smaller screen.

## INTERACTION

- Assuming children always want to save their drawings to your photo library. (Then what?)
- Lagging. Not letting you quickly flip pages.

## DESIGN

- Starting a three-ring circus on the first screen making you feel “you’re not in control, I (the child) am.”
- Poor localization. A book designed for a Japanese audience can’t be simply translated to English work.
- Teasing children with things that look like they can be explored, but giving no option to do so.
- Confusing page turns. You swipe left to right, the page flips up, from the bottom of the screen.
- Freezes and crashes. Yes, they still happen frequently.
- Lacking innovation when thinking up games to extend the story. Does the world need another puzzle, game of concentration, or coloring page?
- No control over background music, language, pacing or presentation.

# MORE MISTAKES

## UNETHICAL BEHAVIOR

- Mixes selling with informing. Might contain links to an external website, or worse, in-app sales to a baby, toddler or preschooler.

- External links. Giving children the ability to send information, or taking them away to your email, or uncharted waters.

## NAVIGATION

- No indicator of where you are in the story, e.g., "where does this end?"

- No obvious way to get to the main menu.

- Not obvious how to turn pages.

- Not understanding the art of page flipping. Worse: accidental flips that are triggered when you try to find things on the screen. Better, full control over the page flips (you can gradually turn the page), along with constant page icons in the lower corners of the screen.

- Page turns are too "springy" (not tied to finger movement, hence less feelings of control).

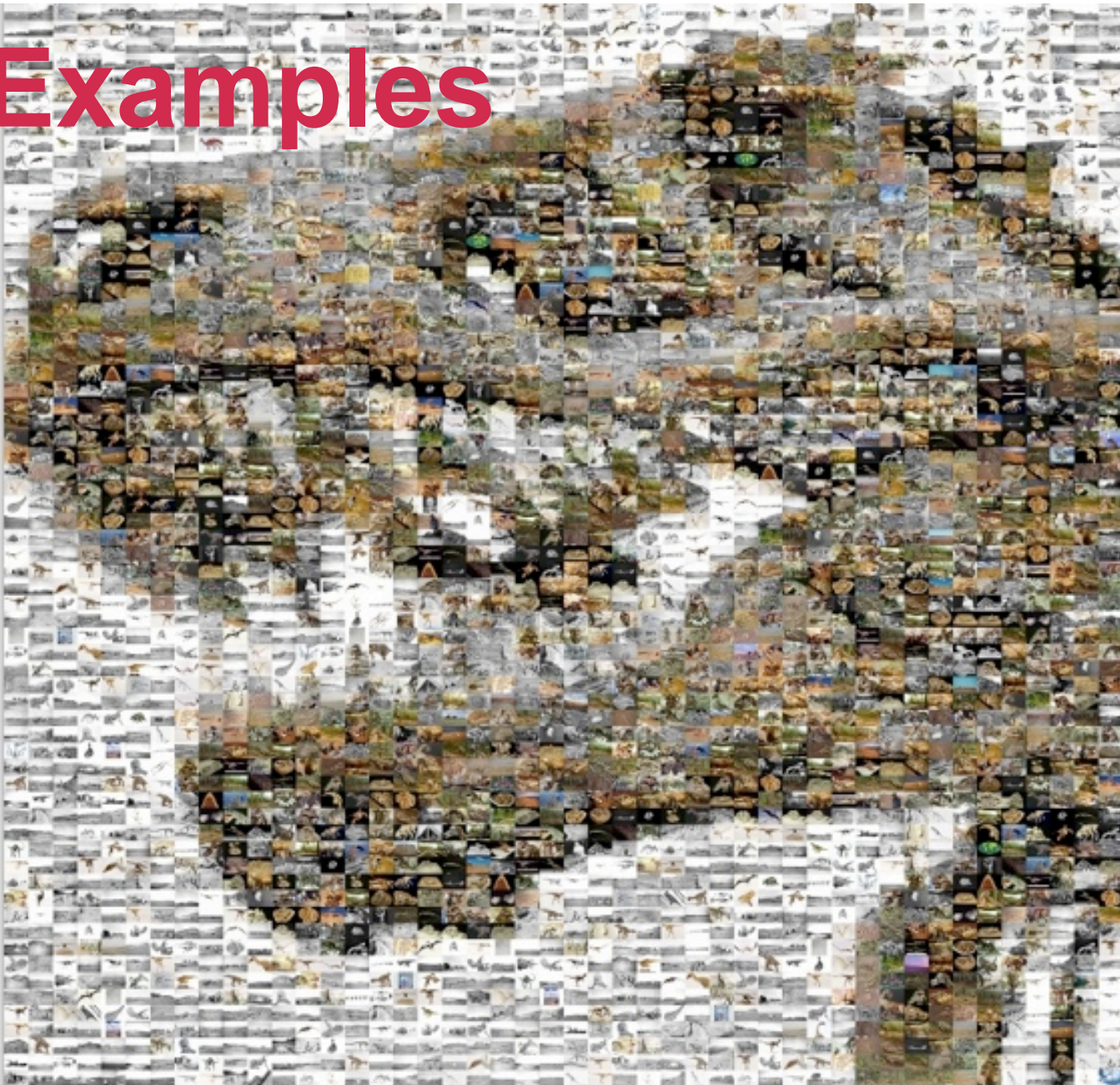


**Just because a product isn't interactive doesn't mean it's bad.**

**Interactivity is like salt on an expensive steak. Use carefully.**



# 3. Examples



# A Letter to 20 Years Ago

## Grandma, you'd better have a seat.

The President is an African American, and you can use a credit card to buy a cup of coffee, and just about everything else. You'd love the checkout counters in grocery stores. They use lasers to read the labels. Some don't have clerks.

Wikipedia is the Encyclopedia Britannica. We use "search engines" a lot for just about everything. There's this service called Google as a Swiss Army knife for your curiosity. It even has your himmels torte recipe!

Bill Gates is the new Rockefeller and a kid named Steve Jobs became Henry Ford after he figured out music players and phones. The telephone is a smart phone. You still dial a number, but they have no dials. Or dial tone. Or wires. Teens want them more than a drivers license? A smart phone, with a data plan! This smart phone thing is probably the most amazing single gadget I could show you to exemplify how things have changed... it's so small you can hold it in the palm of your hand It's your camera, weatherman, alarm clock, calculator, and lets you use that Google thing I told you about. For a few dollars, you can load apps on it that make it into a book, movie player, flashlight, bank, to-do-list, travel agent.

Remember those maps you used to keep folded up in your glove compartment? Today's cars have talking GPS receivers that use satellites to tell you where to drive. That would've certainly saved you and Grandpa from a lot of arguments.

Mario is the new Mickey Mouse, and joy sticks have been replaced by handheld controllers that can track your hand movements. Some games have camera sensors that track your movements



Helga Toelberg, 1894 - 1991

"In a few more years, millions of schoolchildren will have access to what Philip of Macedon's son Alexander enjoyed as a royal prerogative: the personal services of a tutor as well informed and as responsive as Aristotle."

(Patrick Suppes, in 1966, writing about the potential of CAI. Skinner would probably agree).

Patrick Suppes (1922 - )



In the 1960s, Suppes and Richard C. Atkinson (the future president of the University of California) conducted experiments in using computers to teach math and reading to schoolchildren in the Palo Alto area. Stanford's Education Program for Gifted Youth and Computer Curriculum Corporation (CCC, now named Pearson Education Technologies) is an indirect descendant of those early experiments.

# Closing questions

- Do you think there will be less demand for children's authors?
- Do you think print books -- ink on paper -- will go away?

# Thanks!

Warren Buckleitner

*Children's Technology Review*

<http://childrenstech.com> Password: SAMIAM

