

# PICTURE BOOKS AND THE DIGITAL WORLD

## Educators Making Informed Choices

*Junko Yokota* ■ *William H. Teale*

The most influential recent development in publishing is the advent of digital formats. E-books have gone from curious novelty to big deal in a very short time. In the United States in late 2010, *School Library Journal* hosted its first annual Virtual eBook Summit; it was “a big hit” and had over 2,000 participants online hearing librarians, publishers, and content creators talk about the increasingly digital book (Whelan, 2010). Only one year later, the second annual summit on this topic was titled “eBooks: The New Normal.”

The typical e-book read on a dedicated e-reader (Kindle, Nook, etc.) has not hit the children’s literature world for elementary school child readers in a particularly big way, but e-books and apps that incorporate text, illustration, and interactive features and that are directed at an audience of young children—often thought of as the e-equivalent to picture books—have become a major force. We find these digital picture books to be the most exciting innovation in literature for children in a long time—and also the scariest. They are exciting because of the opportunities they afford for creators to produce new artistic forms and for children to have new literary experiences. They are scary because, in many respects, the technology has outpaced both fundamental conceptual understandings and research in the

area and, therefore, we currently have little in the way of reliable reviews of such creations and only limited understanding of what kinds of impact such publications have on children’s literacy and literacy development during the preschool and primary grade years (ages 4-8).

As a result, teachers, school librarians, and literacy researchers have been largely left to their own devices to figure out basic questions related to e-picture books, such as what works, what doesn’t, what’s good, and so what? In this article, we offer perspectives on two fundamental issues related to these materials and young children’s interactions with them that we believe are especially important for educators to think deeply about at this time:

- *Print or digital?* Both print and digital picture books should play a role in the P–grade 2 classroom. But because of the different affordances of each, the choice of which version to use in particular instances needs careful consideration.

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**Junko Yokota** is the director of the Center for Teaching Through Children’s Books, Skokie, Illinois, USA; e-mail [junko.yokota@mac.com](mailto:junko.yokota@mac.com).

**William H. Teale** is a professor of education and the director of the Center for Literacy at the University of Illinois at Chicago, USA; e-mail [wteale@uic.edu](mailto:wteale@uic.edu).

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- *Quality of features of digital picture books.* A series of factors should be considered in assessing digital picture books for use in the classroom.

One other point is important to add about the discussion that follows. Just as is the case with print picture books, several genres of e-picture books are available for young children—concept e-books, informational e-books, stories. We believe that all of these genres need to be included in the early childhood classroom, but we center this article primarily on narrative/story e-books (with some examples from informational or concept books with narrative structures).

### Print or Digital?

Let us be clear from the start that we believe that *both* print and digital picture books should play central roles in early childhood literacy education. The issue in this instance is not one versus the other, but what works well for achieving which ends in particular situations or for particular lessons. The question for a teacher or librarian is, “How do I decide whether this print book or this e-book is the best choice for helping child A experience story B or learn C or extend her desire to read more about D?” To address such a question, let us begin by considering just what a print picture book is and how a digital picture book is both similar and different.

*“How do I decide whether this print book or this e-book is the best choice...?”*

*“We believe that both print and digital picture books should play central roles in early childhood literacy education.”*

### *The Picture Book, Past and Present*

There is a rich theoretical and research literature developed by illustrators (e.g., Bang, 1991; Shulevitz, 1985/1997) and literary scholars (e.g., Nikolajeva & Scott, 2001; Sipe, 1998) that has provided great insight into the art and design of the picture book, as well as research by educators and psychologists into children’s interactions with and responses to picture books (e.g., Sipe, 2008; Sulzby & Teale, 1986; van Kleeck, Stahl, & Bauer, 2003). This body of work has helped us understand, for example, how illustration and text work in synergistic ways in the best picture books to create a reading experience that is more than either of these two individual “parts” of the book, how parents and children interact with picture books, and how picture books are mediated by teachers in classroom settings to help children discuss themes and issues from the books and reflect on author and illustrator craft. Thus, it can justifiably be said that, at this point in time, picture books are a sophisticated art form that also serve significant roles in the literacy and literary development of children.

### *Picture Books Go Digital*

A lot has happened in a short time as computer types, artists, and even researchers have applied the features of computer technologies to transform the print picture book into the digital universe (Yokota, 2012). Basically, the developments thus far can be categorized as follows: 1) scanning entire print picture books, 2) transforming

picture books into film-like creations, 3) transforming picture books with features unique to the digital world, and 4) adding interactive features, including games, that extend beyond the story.

### **Scanning Entire Print Picture Books.**

Early on, the digital picture book was simply a scanned version of the print book to make it available online or through other electronic outlets. For example, in 2002 the International Children’s Digital Library (ICDL) was created to provide a free library of digitized books from around the world (<http://en.childrenslibrary.org>). ICDL scanned each included book in its entirety, retaining the original design, keeping intact features such as the cover, endpapers, book shape, double spreads, illustration placement, and font. Nothing was added; nothing taken away. A good example in English of this approach is the ICDL entry from the USA *When Sophie Gets Angry—Really, Really Angry* (Bang, 2004), a Caldecott Honor Book and thus a picture book of recognized merit. This way of digitizing the picture book maintained every artistic and design decision of the original work. However, one may legitimately ask, “What’s the point?” A key advantage, of course, is global availability and access, but in other respects the original print version can be preferable. For example, screen dimensions obviate the impact of a print book characteristic like book size (Yokota, 2013). Think of Beatrix Potter, who created “little books for little hands” (approximately 5 in. by 6 in.), while Steve Jenkins’ *Actual Size* (2004) was designed to be

almost twice as large (approximately 9 in. by 12 in.) in order to provide child readers with the experience of the actual size of animal dimensions, from the 1/3 in. dwarf goby fish to the 2 ft curled snout and tongue of the giant anteater. On the computer or tablet screen, however, the experiences the child reader has with these different book designs is lost.

In our opinion, what is gained for children in terms of increased access by simply recreating the picture book on a digital screen is frequently not worth what is lost by not having an interaction with the object originally designed for the experience.

**Transforming Picture Books into Film-like Creations.** Another way of taking advantage of digital affordances is creating more of a film-like approach to the book (extending to the computer screen the CD-ROM film productions of earlier years). For example, Scholastic's BookFlix presents the Weston Woods film version of a picture book which reads the book aloud, showing no text but with the camera zooming, panning, cutting between, and otherwise moving about the illustrations, supplemented by sounds related to the book's setting. (By clicking Read Aloud, the child can see the text and have it highlighted one word at a time as it is read.) With a production like this, the e-book creator guides, and thereby impacts, the child's visual experience of connecting text and image. Unlike a print picture book, in which the child reader/listener chooses where to focus attention and for how long, this approach puts the director in charge visually and auditorily.

**Transforming Picture Books to Include Features Unique to the Digital World.** Rather than merely transferring a picture book from print to pixels by scanning it, developers began taking

advantage of what computers can do that printed books cannot by incorporating such features as sound and movement.

Typical of this approach during the first decade of the century is what One More Story ([www.onemorestory.com](http://www.onemorestory.com)) did with its collection. It maintained the overall layout, page sequence, and page turns of each book but changed certain design features and added digital affordances such as the following:

- Altered font, text placement: The text is placed along the bottom of each screen/double-page spread of the story, leaving empty spaces where text was originally in the print version. Furthermore, the font is standardized across all books, the argument being that such a feature makes it easier for beginning readers to find and process the text.
- Added reading audio: The child can select a "Read to Me" mode to hear the book read expressively.
- Added sound and music: Music is scored for the story to complement the book's mood. Sound effects are included to enhance the experience with the story.
- Added "hot spots": Certain elements in the illustrations are programmed to respond to a mouse click or mouseover with sound, animation, or both.

One example is *Rattletrap Car* (Root, 2004), which includes banjo music, background sounds such as cicadas whirring and chickens clucking, and

text highlighted word-by-word in accordance with the reading voice.

Most recently, the advent of tablet devices and the iOS operating system has brought about the biggest change in the e-picture book. All of the foregoing e-book examples originally appeared as print picture books and were subsequently adapted to the e-world. That process has continued—and has been enhanced—with tablets. The enhancements relate to what handheld devices can do that desktop or laptop computers can't—features like gyroscope movements, manipulating through touch items that appear on screen, and, for young children, much easier control of on-screen movement through swiping or touching and dragging rather than having to control a mouse. For example, in the app "Astrojamies" (Demibooks, 2010), the child character Jimmy magically turns into an astronaut and goes into outer space. When there, he "floats" and can be spun, mimicking the weightlessness of outer space and thereby adding to the texture of the story itself. Or, with the Nosy Crow (2011) app of *Cinderella*, the child can respond to Cinderella's request to "help me put the cups in the sink" by touching and dragging them.

In addition, we are now seeing more digital picture-print-sound-movement creations for children that arise not from "translating" a picture book creation into a digital product but as multimedia, interactive storytelling experiences borne out of the digital world itself.

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**Adding Interactive Features, Including Games, Which Extend beyond the Story.**

Many apps and e-books created in the past few years contain supplementary features that the child can access. Most typical for those directed at young children are puzzles, matching games, and coloring or drawing opportunities.

So, with all the e-picture books available, what to choose arises as an important question for educators. We believe this is especially critical because (a) there is so much in terms of story apps and e-picture books for young children put on the market in recent years that is, frankly, of poor quality and (b) there is so little in the way of teacher-directed critical reviews that examine these materials from the perspective of their quality for educational use in the classroom. It is for these reasons that we propose the following criteria that educators can use to evaluate the quality of a story app/e-book.

**Quality of Digital Picture Book Features: Criteria for Evaluation and Selection**

Although the development of the digital book recounted above was presented chronologically, all of these types of digital picture book materials represent the current reality of what is available for young children and what teachers, librarians, and others who work with children must be in a position to evaluate and select from, both for the school

setting and to recommend to families for home use.

Much has been written about criteria for analyzing and evaluating print picture books for young children. As noted earlier, illustrators, book designers and theorists as well as educators, children’s literature specialists, and librarians are concerned with picture book use with children in educational and home settings. Such criteria are well developed (see, e.g., Temple, Martinez, & Yokota, 2015) and should continue to be applied when considering print picture books.

However, it is important to develop a new lens for examining digital forms of picture books for possible use in preschool and primary-grade settings. We offer a set of five criteria for doing so. That said, we maintain that the following three standards related to the quality of story and illustrations apply equally to both print and digital formats:

- Is the story well told, according to literary standards?
- Is the language of the text skillfully crafted?
- Are illustrations artistically skillful, and do they work well with the text to illuminate, extend, and/or co-create the story as a whole?

These are the criteria we recommend for evaluating digital picture books:

1. Is the story appropriately presented in digital format?

2. Does the story take appropriate advantage of features the digital world allows, beyond what is possible in print?
3. Do the interactive features maintain the integrity of the main story?
4. Do any supplementary features align with the story?
5. Do the features make sense in terms of how children learn to read and learn in general?

***Is the Story Appropriately Presented in Digital Format?***

The basic expectation is that the three fundamentals of all quality stories listed above should be present. Over and above these features, look for the following:

- The voice of the reader is appropriate to the story’s tone and characters.
- Sound effects and music are appropriate.
- The size and shape of the illustrations fit the tablet’s proportions.

Yes: One example of an appropriate digital story is the app production of Ed Emberley’s *Go Away, Big Green Monster!* (Night & Day Studios, 2011). Each screen page adds, and subsequently takes away, a different colored feature of the monster. There are three choices for the reader: a male adult (Ed Emberley), a child, and a female adult who sings the text, accompanied by appropriately jaunty music.

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The shape and screen changes work well with a tablet, and the colors are vibrant and well used on the screen to delete features from the monster's face. This app is about as simple as it gets in terms of features, but it serves as a good example of how digital features can be employed effectively to tell a story.

*Not so much:* An e-book that we believe comes up short on this criterion is an app of the highly decorated picture book *Freight Train* by Donald Crews (HarperCollins Publishers, 2010). The original *Freight Train* contains both concept book and narrative elements. The beautifully simple print version presents vibrant colors and even depicts movement through color blurs and represents distance through perspective of size. The app version introduces each of the differently colored train cars on a screen, names it, and enables the user to look inside the car by tapping. It also uses a camera's scanning feature to show the train moving in one direction (left to right), but then, rather confusingly, has it go back the other direction. Perhaps the most distracting feature is the loud singing of "I've Been Working on the Railroad," which drowns out the reader—and which keeps repeating as long as you dwell on a page. This song is then replaced by an equally loud version of "John Henry" by the seventh screen of the app. After one more screen, the app inexplicably ends, omitting the blurring color sequences of the print book (which could have been portrayed even more vividly in a digital environment). Thus, the overall presentation feels unfinished, leaving out critical parts.

Or, with *The Journey of Oliver K. Woodman*, the Tumblebooks e-book version (Pattison, 2003) converts what was a picture book designed in an elongated 12 in. by 9 in. format (24 in. by 9 in. when opened to a two-page spread) to depict the feeling of Oliver's long journey from

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coast to coast into the much less elongated proportions of the screen. Even more problematic is that only one page of the original picture book is shown on the screen at a time, thereby losing completely the contribution of the extended visual stretch of the book created for certain two-page spreads, which is a central aspect of the narrative itself.

### ***Does the Story Take Advantage of Features the Digital World Allows, Beyond What Is Possible in Print?***

The story may take advantage of non-linear storytelling that is more difficult to accomplish in a book where pages are typically turned in one direction. Or, an e-story may have additional features that readers can purchase, enabling them to increase the length or complexity of the story. The option to experience the story in multiple languages is an excellent digital feature.

*Yes:* Piet Raud's "Emma Loves Pink" (WingedChariot, 2010) is narrated by a child reader whose voice is believably the age of the target audience. Readers can hear the child voice reading the story in English, Japanese, or Estonian. "Nighty Night" (Fox & Sheep GmbH Berlin, 2012) is an app that does not have a singular narrative flow, so children can freely choose the order in which the animals go to sleep without affecting the story's comprehensibility. Another feature of "Nighty Night" is that more animals can be purchased and added to the choices.

*Not so much:* *Just Me and My Mom* by Mercer Mayer was an early example of a digitized print book known

as "Living Books." Originally distributed on CD-ROM, these books featured a digitized format in which text was highlighted while read aloud and hot spots that resulted in some movements when clicked. Text highlighting is present in the app, and each individual word can also be clicked to have it read aloud. Clicking on parts of the illustrations brings forth highlighted written words. Thus, overall, this app employs minimal digital affordances that could enhance the reading experience.

### ***Do the Interactive Features Maintain the Integrity of the Main Story?***

Many apps feature interactivity as a key component that complements the narrative flow of the story. But others have interactive opportunities that distract readers by heavily emphasizing embedded games, including features that cause young readers to lose sight of the main storyline.

*Yes:* We deliberately chose the familiar "There's a Monster at the End of this Book" story (Callaway Digital Arts, 2010) as an app that successfully integrates interactivity features with the narrative line to illustrate the idea that a good digital story does not necessarily have to come from an award-winning children's book. The interactivity features of "Monster" tie directly into Grover's attempts to keep the child reader from turning the page because of the monster at the end of the book. Grover ties knots, nails up boards, builds a brick wall; the child is able to break through each of

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these by touching hot spots and thus moving the story forward.

There are other ways to build interactivity directly into the story. Source Books’ Put Me in the Story series enables inserting the child’s name and photo into the dedication page, also embedding the name throughout the books’ illustrations and at some points in the text. “When You Grow Up” (Stepworks, 2011) has a high level of interactivity in that the camera in the tablet takes a photograph of the child’s face, which is then inserted into the story as the main character. The story focuses on various career options, so this feature makes sense to the narrative flow.

“Scruffy Kitty” (WingedChariot, 2010) is an app in which the background setting of the narrative changes according to the calendar to depict different North American seasons/holidays as the months change. In the “Astrojammies” app (Demibooks, 2010) referred to earlier, the character who journeys imaginatively to outer space can be spun and can “float” by shifting the tablet’s angle, thus depicting the loss of gravity that is central to the story line.

*Not so much:* An example of a highly regarded picture book that does little in its app form to maintain the integrity of the story line (yet gets high marks in many reviews) is *The Tale of Peter Rabbit* by Beatrix Potter (Popout!, 2010). The app version includes animations and features that are beautiful, technically

innovative, and probably engaging to young children, but they also interrupt the child’s attention to the story itself. For example, blackberries feature in the story, so on one screen of the app large blackberries appear at the top of the screen and float downward. If touched, they splat and make a juicy splash on the screen. This feature may be appealing to children and keep them riveted to the screen, but the action has nothing to do with the story. Likewise, on another page, leaves fall and can be magnified in size, but the child must race to do so before the leaves reach the bottom of the screen. Great for keeping the young child busy; terrible for supporting story comprehension.

### ***Do Any Supplementary Features Align With the Story?***

As mentioned above, the typical supplementary features found in e-books and apps for young children are puzzles, matching memory games, painting/drawing opportunities, and the like. The range of these supplementary features varies across different products (some have none at all), and we feel that they are not as important to evaluation and selection for classroom use as the other four criteria discussed. But it is useful to examine these if they are present, just so you are aware of what to direct children toward—or away from. It is preferable to use apps in which some character or central feature of the book is represented in the supplementary features instead of apps that merely include generic

activities that have little or no content tie in to the story itself.

*Yes:* perhaps the most wide-ranging set of supplementary features are those associated with Mo Willems’ “Pigeon” books. Currently on the market is an app (Disney, 2013) that provides opportunities for children to dictate and illustrate their own stories in three different modes, including animation. There are even “pigeon-y” sound effects and music.

*Not so much:* Oliver Jeffers’ *The Heart in the Bottle* e-book (Penguin Group USA, 2010) has a brief “About the Author/Illustrator” page but does not fully utilize the opportunities available in the app world, since it does not include multimedia aspects such as additional photographs, a video interview, link to an appropriate webpage, and so forth. The “Other Books” page of this app only displays book covers and does not include summaries, sample pages, or trailers.

### ***Do the Features Make Sense in Terms of How Children Learn to Read and Learn in General?***

This criterion is included specifically to focus on the issue of the support that digital e-books and apps (can) give in the early literacy acquisition process. We see great potential for digital narrative materials to support important foundational skills (e.g., print awareness, alphabetic principle), vocabulary development, fluency, and word recognition. These are by no means the only reasons why a teacher may use such digital resources in the classroom, but if a particular app or e-book is selected with that intention, it is important to consider this criterion. We mention this because, in examining hundreds of e-books and apps, we were frequently struck by how little the developers of products seemed to know about how children actually

learn to read—the typical developmental patterns they go through and the strategies that enable them to progress. We have identified four especially important areas related to early literacy development to look for: text appearance, highlighting of text (in the Read to Me mode), opportunities for word exploration, and illustration-text match.

*Yes, text appearance:* Most e-books and apps rate well on this characteristic. They utilize standard fonts, make them a reasonable size, and place the text on the screen in such a way that young children can easily attend to it. However, some productions deliberately choose to be artistic in text appearance, utilizing lettering that looks intriguing and different or digital features that make words appear and disappear, employing other creative flourishes—all great for aesthetic visual appeal and perhaps excellent for conveying the mood of the story. But they end up being not so supportive for children's early literacy skill development (*if* that is the reason for selection).

*Yes, text highlighting:* Again, most e-books and apps rate well on this feature. Desirable is a technique that highlights words (ideally in a color different from the font color) left to right, top to bottom (for languages read in that direction). Many companies design their apps to fade out the word just read as the next word is being highlighted. This seems useful as it models

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that reading should be fluent rather than word-by-word. Some productions' apps highlight by phrase, which also emphasizes chunking when reading, but this takes away somewhat from supporting a developing concept of word.

The other feature to note is whether the text remains on the page after it has been read (as most often is the case) or disappears (as the *Nosy Crow* stories do). There is currently no research indicating the effects or advantages of either of these text presentation styles, but it is something to consider, depending on how you may plan to use the app instructionally.

*Yes, opportunities for word exploration:* The only story apps or e-books for young children that we have found which provide rich opportunities for exploring either the phonological characteristics of words or aspects of word recognition or vocabulary development are those created by researchers. As far as we can discern, such materials are not at this time available commercially or through other distribution channels. What such digital materials do is, for example, enable children to click on a word and have it pronounced, broken down into onset and rime or individual phonemes; or they facilitate exploration of the meaning of the word, either in the context of the story and in general. Other features support word recognition or specific decoding patterns. We hope to see such features more generally available in educationally related story apps and e-books in the near future.

*Yes, illustration-text match:* Productions that have good illustration-text match are characterized by two features: (1) what the child sees visually on a screen corresponds to and expands on what the text for that screen actually says and (2) any hot spot for which one clicks on an item or character in the illustration provides an accurate word

*“(It) may be appealing to children... but has nothing to do with the story.”*

and a word that can typically be understood by the children for whom the app is being selected. This may seem almost too obvious to point out; but as is discussed below, we have seen problems ranging from a mismatch between what is seen in the illustration and what is said in the text to different words being pronounced for different instances of the same illustrated item on the same screen. So, we recommend that teachers examine any potential digital story just to make sure there is no abundance of potentially distracting instances of this factor.

*Not so much, text appearance:* Although we believe that most beginning readers can adjust to a range of font differences in the reading materials they experience, the artistic, collage font used for the “*Fierce Mouse*” app (Tizio BV, 2011) makes it extremely difficult for most young children to build any knowledge or skill related to word recognition or phonics patterns. Again, we do not imply that such decorative fonts are inappropriate in apps for young children, but we suggest that a teacher carefully consider the style of font used electronically *if* the intention is to help develop children's knowledge of the alphabetic principle or word recognition skills. The other problem we have seen in some apps related to text appearance is overlaying words on the illustration in such a way that obscures a part of the illustration important to meaning-making on that screen/page.

*Not so much, text highlighting:* The approach taken in the e-book “Diary of a Worm” (Cronin, 2003) represents problematic highlighting: they highlight one line of text at a time. This is not a very supportive feature for young children as it does little to help with either left-to-right directionality or speech-to-print matching.

*Not so much, illustration-text match:* We worry quite a bit about the cases in which a highly regarded print book is transformed into an e-picture book because it would be easy for educators or parents to assume that if it worked well in print, it would be of equal quality when transformed. Take the case of the Dr. Seuss books, the name implying a branding of something as readable and supportive of learning to read. *The Cat in the Hat* (Oceanhouse Media, 2010), for example, is a print book that we consider to be excellent in concept and design for beginning readers. However, we are not enthusiastic about its digital production in terms of supporting beginning readers. For one thing, this app enables the child to touch various parts of the illustration to have a printed word pop up and be pronounced. For many of the items, the word/pronunciation match is appropriate, but not always. For example, on the second screen of the app is the illustration from the book in which the two children sit looking out the window as the rain comes down. Touch the blue ball and the word “ball” appears; touch the tennis racket beside the ball and “ball” again appears/is pronounced. Touch the bicycle and one of the white balls: “play.” The other white ball yields “ball.” Touch any piece of furniture: “house.” Touch the window: “wet” (a word in the text itself) zooms out from the text and is pronounced; touch the curtains on the window and you also see and hear “wet” (from the text). All

## “What experiences can the digital product offer the child that the print book cannot?”

of the screens in the app are similarly designed. Needless to say, we find this inconsistency problematic in terms of a function deliberately designed into this app (as well as others in the Dr. Seuss series of apps).

### Implications for Educators: Pedagogical Goals and Digital Books

We have argued that both print and digital story experiences are necessary for children’s early literacy development and that the key issue for the teacher to consider with respect to the use of e-picture books and story apps in the classroom is, “What experiences can the digital product offer the child that the print book cannot?” Thus, the teacher keeps at the center of decision-making the potential impact of the material on child readers.

The possibilities that digital picture books have for augmenting children’s early literacy experiences are exciting. Because of the new affordances made possible in the digital realm, we see these materials as especially useful for promoting:

- *Multimedia comprehension and composition:* Well-designed digital picture books integrate illustration, text, sound, and sometimes also movement so that each complements the other and, together, they provide a multimedia text experience. The ability to process and produce multimedia texts is central to what it means to be literate in the 21st century, and interactions with

digital picture books in early childhood are an excellent way to begin building these skills.

- *Language learning:* One especially intriguing feature of digital books is the ability to readily change the language of the text. Whether children speak or even understand another language should not be a stopping point, but instead can be seen as an opportunity for them to become aware of the possibilities of other languages and for English learners to acquire vocabulary. With simple texts, all children can be helped to learn phrases and words in another language. For example in the “Nighty Night” app, various barnyard animals can be put to sleep by touching each light to turn it off, causing the app to say, “Good night, [name of animal].” The app can do this in several languages, thus enabling children to learn both “good night” and animal names in various languages. A number of more elaborate, well-crafted stories also have multiple language options, thus offering texts that are professionally translated into storybook language with native speakers narrating them.
- *Personalization and motivation:* Some digital storybooks allow video/audio input so that the “Read to Me” feature can be personalized for the child by having a family member or friend reading (see *Paddington Bear* [HarperCollins], for example) or embedding the



child's name or picture into the story itself (e.g., Put Me in the Story or "When You Grow Up" discussed earlier). Such features can engender high motivation for a young child to repeatedly engage with the story.

But for digital picture books to play an integral role in early literacy development rather than merely being window dressing, it is important that educators select wisely from an ever-increasing flood of such materials into the market, knowing when a digital choice is appropriate and stands to benefit the child and not allowing nostalgia or assumptions to guide choices (i.e., "if it was a good/well-known children's book, it must be good as an app" kind of thinking, without fully analyzing the app's features). Problematic apps designed for young children abound, yet surprisingly, there is relatively little critique in the reviewing community. We hope that the evaluation criteria offered above help guide such decisions. But we want to reiterate that, regardless of the quality of the app or digital book, teachers must also consider the classroom context in which it is to be used to make a final decision.

Because developments in the digital picture book/app world are coming so quickly, we cannot predict what the future will hold, even by the time this article appears in print. But one thing is clear: the world of digital picture books will only expand, and the world of print picture books will not disappear, any more than oral storytelling disappeared with the invention of the printing press. So while this article

considers the development of the digital world, we believe that the focus should always be on how (and whether) content is integrated and enhanced with every new format that comes along.

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