

Educational App or Digital Candy? Helping Parents Choose Quality Apps for Kids

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There are now over 80,000 apps marketed as “educational” in the Apple app store, the majority of which are targeted towards children and even babies. Parents are led to believe that these apps provide real learning opportunities for their children, but scientific research suggests that many of the apps are nothing more than digital candy.



“Many apps marketed as ‘educational’ are basically the equivalent of sugary foods,” says Kathy Hirsh-Pasek of Temple University, co-author on a new [report](#) investigating educational apps. “At best, most of these apps will do no harm; at worst, they add even more distraction to children’s deeply distracting lives.”

In the comprehensive [report](#), an interdisciplinary team of researchers including Hirsh-Pasek, Jennifer Zosh (Penn State University, Brandywine), and Roberta Michnick Golinkoff (University of Delaware) seeks to provide parents, educators, and app designers with an evidence-based guide they can use to evaluate apps for real educational benefits.

The report, published in *Psychological Science in the Public Interest*, a journal of the [Association for Psychological Science](#), reviews available research on the science of learning from diverse fields including psychological science, neuroscience, and linguistics.

Based on their findings, the researchers identify the features that parents and educators should avoid and those they should seek out to find high-quality educational apps amidst all the “empty-calorie” junk:

- Avoid apps that keep children’s attention through passive activities, like repetitive swiping. Instead, look for apps that require real mental effort and depend on the child’s **active participation**.

- Avoid apps that feature a lot of distracting “bells and whistles.” Instead, look for apps that support **sustained engagement** with the task at hand.
- Avoid apps that present children with knowledge in a vacuum. Instead, look for apps that help children make **meaningful connections** between new information and what they already know.
- Avoid apps that don’t involve the most powerful learning resource we have — other humans. Instead, look for apps that encourage **social interaction** via discussion, competition, or conversation.
- Avoid apps that tell your child what to know. Instead, look for apps that use **guided exploration** to help your child discover new information on their own terms.

“We want parents to know that claims about educational content are completely unregulated, any app developer can slap the ‘educational’ label on their product,” says Hirsh-Pasek. “Using scientific research as a guide, we can help parents begin to evaluate the morass of stuff that exists in the app store.”

Zosh adds, “The challenge parents face is to determine which apps truly are educational and which are simply masquerading as such. We sought to empower parents to make educated decisions about what is actually educational.”

For example, while findings released last week indicate that app usage is becoming increasingly common among young children and even babies, scientific research has yet to evaluate the educational benefit of these kinds of digital media.

And even when an app has content that looks like it should be educational, like letters or numbers, it doesn’t mean that the app has true educational value. A particular problem in apps available today, the researchers found, is the use of so-called enhancements, like hot spots, sounds, and games that grab children’s attention in the middle of a story or activity.

“While these ‘bells and whistles’ might be fun, research suggests that these kinds of distractions actually take away from, rather than enhance, learning,” the researchers [explain in a Q&A](#) about the new report.

In the end, if an app seems too good to be true, it probably is, the researchers say.

“Many apps make dramatic promises — from teaching advanced concepts to infants or even changing your child’s brain,” notes Zosh. “Parents should use common sense and remember that an app — even an educational app — is just an app, not a miracle.”

Co-authors on the report include James H. Gray (Sesame Workshop), Michael B. Robb (Fred Rogers Center at Saint Vincent College), and Jordy Kaufman (Swinburne University of Technology).

The full report, and accompanying commentary by communications researcher Ellen Wartella (Northwestern University), are available [online](#).