

# Cutting Teeth in Front of the Screen

An expert on interactive media for children argues that an electronic toy cannot substitute for face-to-face interaction with a loving parent.

By Carla Seal-Wanner

In last summer's movie, "Meet the Fockers," the grandfather (played by Robert De Niro), an ex-CIA agent put in charge of his year-old grandson for an extended visit, decides he is going to get him to leap over developmental barriers in a single bound by teaching the youngster to communicate through sign language before he can talk. He constructs an elaborate electronic learning environment complete with drill and practice exercises that provoke the child to repeat the signs. For many hours each day the child is placed in this contraption practicing the signs and performing them for the adults around him. Predictably, the onlookers react with ecstasy over every minutia of progress he makes in anticipation of the day he utters his first word. In the end, the "experiment" is ruined by the son-in-law who mistakenly blurts out the word "asshole" in front of his nephew, who enthusiastically repeats it in precisely the correct context! Thus, his first word is uttered without the assistance of this

device, but due to the compelling actions of his highly entertaining uncle.

Obviously exaggerated for comic effect, the movie aptly depicts the change in child rearing over the past decade as interactive media designed for very young children have become pervasive, portable and persuasively marketed to parents anxious to give their children every possible form of assistance for academic success. The reality is that for many children there is little good old-fashioned downtime. When children do not have access to the multiple electronic screens in their homes, the back of the SUV or on an airplane, there is a vast array of wireless digital products available to keep them entertained. As well as educated? Yes, indeed, many are touted as contributing to the intellectual growth of even the youngest members of society.

Historically, two events have influenced the trend to plug the youngest consumer into a regular media diet. In 1996, at the White House Conference

on Early Childhood Development and Learning, Hillary Clinton linked new research evidence that brain development in early childhood required enrichment to achieve its full natural potential, with a national policy initiative to invest heavily in early education. Parents were assaulted with a barrage of media hype that delivered the take-away message that they were not doing enough to take advantage of the “window of opportunity” for their child’s maximal brain development. Poor parents, turns out Mother Nature does just fine on her own and unless a child lives in a deprived environment lacking normal environmental stimuli, little help was needed to develop thought and language. Despite the clarification by many development psychologists at the time, media companies saw this as an opportunity to ease parents’ anxiety as well as lighten their pocketbooks and started developing products to increase the child’s learning potential.

In addition, the success of the British import *Teletubbies*, which began on PBS in 1998, demonstrated that even toddlers are a viable and, indeed, lucrative, target audience. From this time on, children’s media companies recognized that the youngest viewers may be the *most* available consumers. They are either at home or in some day-care situation all day. Many caretakers were more than willing to believe that these programs were useful for developing cognitive skills and, besides, every parent needs some guilt-free downtime to prepare snacks, the family

meal, do the housework, carve out some work done from home, or even sneak in a welcome rest. Since that time infants and toddlers have become a key media-consumer demographic for which many millions of development and production dollars have been spent by the leading children’s media producers. The baby-educating industry is now estimated to be a \$1-billion-a-year business.

With the production of videos/DVD’s targeted at infants to one-and-a-half-year-olds, tripling since 2002, many more babies are spending more of their waking hours in front of an electronic screen. These media companies claim that even the youngest consumers substantially benefit from this mode of cerebral stimulation and many parents purchase these products with the hope that they will develop the cognitive skills necessary for school success faster



*Blue's Clues* has real educational value.

through this exposure. Whether or not these products add to a child's positive intellectual growth, one thing is certain: these parents want to have the option to try them out. Who knows, if they don't, their child may be behind the curve when they arrive in kindergarten!

The problem is that even producers with the best intention to create worthwhile programs or products have jumped on this bandwagon without the proper baggage. While some of the pioneering programs designed for early learners (*Sesame Street*, *Blues Clues*, *Reading Rainbow*, *Arthur*) were based on developmental theory and ongoing formative evaluation that tested programs' educational objectives, the research and development process for many other efforts has not been as dutiful. However, this has not prevented producers from over claiming the cognitive and social learning that results from exposure to these ubiquitous offerings.

If this grandchild in "Meet the Fockers" were not a fictional character but a child in the real world he would fall directly into the demographic described in two recent Kaiser Family Foundation reports documenting this widespread use of electron media by our very youngest citizens. In both reports — *Zero to Six: Electronic Media in the Lives of Infants, Toddlers and Preschoolers* (2003) and *The Effects of Electronic Media on Children Zero to Six* (2005), a national survey of media consumption, a publication supplementing the findings of the 2003 report with a review of extant research — the media "habits" of this new audience

are well documented. Were he living in the real world, this youngster would be one of the 59 percent of American children under six who spend an average of 2 hours a day in front of a media screen. Thirty percent of children zero to three years old and 43 percent of children four

## **The optimal way to stimulate brain growth between the age of zero and 24 months is through interaction with parents and other humans...**

to six years old have televisions in their bedrooms; these children tend to watch even more TV per day. Those with TV's in their rooms and who are from "heavy television" homes — characterized by multiple sets and television constantly on during the day — read less and learn to read later than those in homes with limited television viewing. They found that not only do children six and under spend an average of two hours per day watching television but this national media-consumption diet includes some new dishes as well. Fifty to 70 percent are using digital media, video games and computers frequently. The children of parents who have strongly enforced media-related rules spend less time with media and more time reading. But, even in those households the children are spending an average of one half-hour less time with media than other children who have less stringent rules about media consumption.

The Kaiser Family Foundation reports verify "the immersion of our very youngest children in the world of electronic and interactive media." The authors found that during the critical developmental years from zero to six many American children are spending too much time in front of an electronic screen of one kind or another. Not only

does the foundation document this increase in programming directed to infants and preschoolers: it questions its value. While clear answers to questions about the impact of these products are not yet known, many child development experts worry that with the greater access to these products (due to the price-point going down and the ease of access as a result of portability) there will be more widespread use of wireless technologies to keep children “busy” too many hours of their day.

Based on these findings, the Kaiser Family Foundation along with the American Academy of Pediatrics sounded a wake-up call to parents and policy makers heralding the need to learn more about the effects of this phenomenon in American society. Very little research has been conducted on the media habits of children from birth until they enter

school. The Kaiser Family Foundation report published in 2005 provides a meta-analysis of the research that has been done from the 1960’s to the present and finds a dearth of studies on this crucial age period when much of the cognitive and social development necessary for school readiness occurs. This literature review suggests that this is not a funding priority for the Federal government, foundations or academic institutions. Kaiser has just released a new report which is highly critical of claims by manufacturers of electronic educational toys that these devices actually help very young children to learn. In fact, there is almost no research to support the idea that educational media are actually educational.

The fictionalized grandpa in “Meet the Fockers” obviously had not read about the Kaiser Family Foundation or the American Academy of Pediatrics’ warning that caretakers should limit the use of electronic media by infants and toddlers. They clearly state that the optimal way to stimulate brain growth between the age of zero to 24 months is through interactions with parents and other humans and simple manipulative tactile toys (like blocks, sand, paper cut-outs). Arguing that electronic media cannot provide this quality of interaction, they state that young children should not be in the habit of using screen media until they are older than two. Further, they recommend that children older than two should be limited to an hour a day and encouraged to engage in creative, imaginative and problem-solving play activities with family and



*Dora the Explorer*, another example of constructive programming.

peers inside and outside.

It is easy to understand the seductive quality of these products for parents. I recently spent the afternoon with a younger friend of mine who is a first-time parent. Her son is just over two years old and he had every imaginable new interactive toy strewn around their apartment. As we chatted and caught up on our lives he went from one to the other “playing” with them until he lost interest and moved to the next one. Steady chatter from various media characters provided the background for our conversation as her son went from one activity to another. The “talking” was like the b-roll to the central movie track running in the room. It was competing for its own airtime. Every few minutes he would come by, curl up near his mother and me and point to something happening on the screen or with the talking plush. My friend would respond with enthusiasm and play along for a while and then we would resume our conversation and he would resume his — with his “toy.”

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What’s wrong with this picture? Nothing, you could argue. It’s just fine for the child to have his attention held while mom is allowed to be absorbed in some well-deserved adult conversation she so desperately misses being home alone with a preschooler all day long. He may even learn how to pronounce a new word or two. Yet, even if a parent embraces the “it can’t hurt them” philosophy, the

truth is that the jury is still out on the real value of these interactions until more research on the effects of these products is conducted.

I compared this scene to my daughter’s pre-school years, a mere 11 years earlier, when the only toys that talked back to her were the few “interactive plushes” we allowed into our home that had at best two messages (repeated incessantly so as to send the cats running for shelter after just a few minutes of play) and the first iteration of so-called “interactive” books that had side panels which when pressed reinforced words in the narrative and provided sound effects (that only remotely resembled the sounds and were also extremely irritating to the cats and me when played with for more than one run-through at a time). I also have fond memories of knowing that my daughter had awakened from a nap by hearing cooing and giggling coming from her room as she interacted with the “activity center” attached to her crib. Via the baby monitor she sounded the wake-up alarm with the sound of the bell ringing

from the telephone dial, the beeping nose of the clown, and the cranking of the handle that reminded me of the days when we used to insert playing cards in the spokes of

our bikes. There is no doubt that the new interactive toys have graduated to a much “smarter” class. They have multiple branching paths and many more options that *seem* to respond to the child’s individual queries. The result being that the child’s attention is held for much longer and the parent may be persuaded that some “learning” may actually be taking place. Though these

products are more “interactive” and the marketing hyperbole would like parents to believe that interactions with these products will enhance learning, parents need to realize that these products do not supplant the interactions caretakers have with children that help develop the cognitive foundation for language and reasoning.

There is also the question of the cost of these products and the pressure it puts on parents. All parents have to ask themselves if the value-added through interactivity makes them a better choice for their child than say...a book? I also wonder about the psychological impact of the digital divide on families who are equally vulnerable to the marketing campaigns for these products but cannot afford them. While the cost of the technology rapidly decreases it still represents a significant expense when a family has to make choices with a small budget for nonessential purchases. There is no doubt that affluent children have greater access to these products than poor children. In a study I am currently conducting with low-income families one mother told me; “I saved money and got my daughter a ‘Leap Pad,’ but we could only afford one cartridge and she is really bored with it now, but I just can’t afford to keep buying new ones.” Parents with very little disposable income feel the pressure to purchase these ‘learning toys’ for their children as much as affluent parents. This mother suffers twice for her economic disadvantage. Once because she may already feel that her child will have a harder time competing due to being at a substandard pre-school, and, second, because the products *claiming*

to give her child the “leap” forward are financially out of reach.

I wish all parents understood that their own conversation and affection combine to form the best key for unlocking a child’s ability to jump forward as a learner. Seizing natural opportunities like having a simple conversation about what the child is eating for breakfast should not be slighted.

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In *Einstein Never Used Flash Cards*, Hirsh-Pasek and Golinkoff argue that the trend among parents who are overly anxious about their child’s success has made parents more vulnerable to the hyped marketing that surrounds these interactive products. The authors worry that “the cult of achievement” has rendered simple play underrated. Parents forget that it is far better to take out a few pots and pans, cardboard boxes and a roll of tape, or a picture book for some quiet lap time pointing out familiar objects, colors or alphanumeric symbols. An electronic toy will never be able to provide the immediate and individual feedback that face-to-face interaction with a loving parent provides. Time spent with these products should not be mistaken as the equivalent benefit of time spent with a caring adult. Another worry these products raise is that once media habits develop that involve immediate gratification the child’s expectations for constant positive reinforcement may result in them responding mainly to extrinsic rewards rather than developing internally satisfying intrinsic goals.

That said, who can begrudge a parent a bit of downtime, especially when they child seems genuinely engaged? My heart goes out to parents. They only want the best for their children. But we have to be mindful that just as our children are targeted as consumers so are we. In his book, *The Hurried Child* (2001), David Elkind describes the child as a victim of a society that has caused parents to expect inappropriately high levels of academic achievement from their young children. He warned that the pressure to excel intellectually at an early age diminishes the aspects of the child's natural learning environment that results in balanced social, emotional and cognitive growth. Rushing a child's intellectual achievements can cause anxiety, depression and low self-esteem. Children are wired to learn at a developmental pace that allows them to absorb, assimilate and accommodate knowledge. If you overload their system you are likely to cause sparks to fly.

Garrison Keillor ends his weekly radio program, *A Prairie Home Companion*, with his signature sign-off:

*"That's the news from Lake Wobegon, where all the woman are strong, all the men are good-looking, and all the children are above average."*

The desire for the "above average" child is precisely the parental wish that makes producers of preschool media salivate. With the average home having multiple TV sets and computers complete with dazzling interactive and multimedia capabilities why not have at least one screen dedicated to content targeted at raising the bar for the success of your children? Besides it might give the wee ones the edge they need to get into Harvard?

Not that I would necessarily endorse

this goal as a smart one for parents, but lets say for the sake of argument that the media producers goals are altruistic and are not just aimed at soliciting the youngest "eyeballs"? Then, I would argue they have to do their own homework before they assign it to the students. If you make educational media you have a huge responsibility to deliver education.

While attention and comprehension research has been so successful in informing educational television programs, the equivalent focus on such studies has not developed for the "new media" targeted at young consumers (computer software, video games, internet services and electronic toys). The positive influences of age-appropriate educational programming on the child's school readiness have been used as the basis for the claims made by these companies. But the new forms of media that involve different attention- and cognitive-processing capacities, the physical and kinesthetic aspects tapped by the demands of eye-hand coordination, the parallel processing of multiple streams of content, and interactivity, require fresh research techniques and models. Most of the research that has been conducted for interactive product development is proprietary and is not available to the public. We don't know what results have been demonstrated.

A national research initiative, the Children and Media Research Act (CAMRA), is currently before Congress. It's purpose is to determine the impact of the new media in our children's lives. This research will no doubt result in better products and services, more informed parents and the healthy cognitive, social and physical development of our children.

Needless to say, children grow up with

many varied experiences that influence their intellectual and emotional growth. Undeniably, media in its many broadcast and narrowcast forms is a strong informal influence. Its right up they're with the primary ones: family, and formal schooling. The many waking hours of each day can easily accommodate the small amount of fun and educational media use that is appropriate for our youngest learners. Media producers should not be greedy for more time in the child's life than is justified. Parents, seize the day: you need not sacrifice the vital hours of contact your children need for the spontaneous learning with the family, caretakers and friends that leads

to balanced, joyful, productive lives.

My first grandchild will arrive this March and the first thing I am going to buy him/her is one of those activity centers for the crib. I justify this low-tech "interactive toy" because one of the greatest moments in a parent's life is when she enters the room after her child's nap to hear the squeals of joy and feel the touch of out stretched arms from the knowing child that is thrilled, literally beyond words, that their favorite playmate has arrived at long last! Ring, Beep, Flip, Flip, Flip. I wonder if they still make them. I suppose I can find a "vintage" one on eBay!

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