D is for Digital:

An Analysis of the Children's Interactive Media Environment With a Focus on Mass Marketed Products that Promote Learning

Executive Summary

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The Joan Ganz Cooney Center at Sesame Workshop

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From virtual penguins to video games, there are a plethora of digital products on the market that target a new generation of digital natives — children growing up immersed in media that shape the way they live and learn. Today's children confidently roam rich virtual worlds, competently create content to share with their online peers, and easily navigate strategic video games via wireless, motion-sensing controllers. Experts have documented and parents believe that the new interactive media developed largely in the past decade represent a vital opportunity to leverage children's interests to expand their skills and knowledge, but major concerns with the current market's overall quality, developmental appropriateness, and educational value persist. This paper analyzes the children's interactive media environment with a focus on mass marketed, informal learning products for children ages 3 to 11. It examines key factors influencing the environment, scans the current state of the market, and makes recommendations to inform research, production and policy to expand quality educational media for children.

MACRO-FACTORS

Macro-factors influencing the marketplace fall into two key categories, those that reflect children's media usage and those that reflect consumer market trends.

Children's Media Usage

1. Children are using digital media more often and at an earlier age, beginning to use electronic gadgets at age 6.7, as opposed to age 8.1 in 2005 (NPD, 2007).

2. Increasingly, children are multitasking, packing 8.5 hours of media consumption into 6.5 hours of time (Rideout et al., 2005).

3. Parents accept that children have become digital media consumers, with a majority believing that video games are a positive part of their children's lives (Entertainment Software Association, 2006), and that the Internet helps their children learn (Cable in the Classroom, 2007).

Consumer Market Trends

1. Children are flocking to virtual worlds, with four of the top five virtual world sites being youth-focused in June 2007 (Prescott, 2007).

2. The recent success of Nintendo's Wii has spawned significant investment in the casual gaming market.

3. Video content has become ubiquitous on the Web, with online video consumption rivaling all other major activities online in 2007 (Bieber et. al., 2007).

4. Youth are generating their own content, and there are a host of new digital media products on the market designed to help them do just that.

5. Media convergence has never been more prominent, providing children with continuous round-the-clock access to content.

CURRENT STATE OF THE MARKET

Four industries constitute the bulk of digital media products that children consume: toys, video games, computer software and Web destinations.

1. Toys: Educational toys, referred to in the industry as Electronic Learning Aids (ELAs), represent a significant category within the $22 billion toy industry.

2. Video Games: Very few educational video games that teach traditional school skills are available within the influential $12.5 billion video game industry.

3. Computer Games: Though the $1 billion computer game industry is smaller than the others examined for this report, both parents and children accept computer games as a medium for learning, highlighted by the fact that the best selling children's *educational* computer games outsold the best selling *entertainment* games in 2006 (NPD, 2006).

IV. Web Destinations: Given the widespread acceptance of the Internet as a prominent and enduring form of media, it is not surprising that a multitude of Web destinations aim to educate while entertaining children.

RECOMMENDATIONS

This report concludes with recommendations for harnessing digital media to support children's learning divided into three key drivers of the marketplace: academic research, product development/media production and industry policy.

Academic Research

1. Set a research agenda that addresses the implications of market trends on product development. There are a number of trends outlined in this scan — ranging from multitasking to virtual world play — that are shaping the state of the children's digital media environment. Researchers should seek to understand the implications of these trends on children's informal learning, and address how developers can create responsible products that can advance children's learning and healthy development.

2. Disseminate research findings to industry. Research conducted by academic scholars in the field of educational technology is rarely reviewed by the developers and producers of children's digital media. Research findings should be regularly disseminated to non-academics through industry publications and events.

Product Development/Media Production

1. Create educational video games for children, filling a gap in the market. Although casual gaming has emerged as a significant trend, there are very few educational video games on the market for this demographic. The top 20 children's game titles earned more than $500 million in 2006 (NPD, 2006), a powerful incentive for industry leaders to consider while developing games with educational value.

2. Develop educational Web/toy hybrids, capitalizing on the popularity of virtual worlds. Although almost half of the ELA products identified through this scan utilize an additional medium (such as television), only one product hooks users into the Web. ELA producers should capitalize on the "virtual world phenomenon" by creating Web/toy hybrids that promote learning across platforms.

3. Break the traditional model of one child per screen in children's educational digital media. The bulk of educational digital media products now on the market assume one child sitting alone in front of a screen; however, better learning takes place when an adult is present to scaffold the child's learning experience. With products that encourage group play, notably Nintendo's Wii, achieving mainstream commercial success, this is an opportune time to develop educational digital media products that encourage intergenerational interaction.

4. Leverage popular, entertainment-based digital media products for children's learning. Many popular children's entertainment products can have significant educational value if used appropriately. Supplemental educational materials should be developed that guide parents and educators on how to adapt such products for children's learning.

Industry Policy

1. Create evidentiary standards to help make sense of products marketed as "educational." This scan identifies a market replete with children's digital media products that advertise unsubstantiated educational claims. No voluntary or regulatory standards currently exist around marketing products as educational. Without firm and independently verified standards of educational value, how is a parent or educator able to discern if products live up to their claims?

2. Protect children from digital age commercialism. The emergence of immersive digital media products for children, such as virtual worlds, creates an unprecedented opportunity for commercial marketing. For children under the age of 12 who are highly impressionable, it is especially important to advance policies that safeguard them from commercial targeting in the digital age.

advancing children's learning in a digital age

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