What in the World Happened to Carmen Sandiego?

The Edutainment Era: Debunking Myths and Sharing Lessons Learned

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Introduction

The Games and Learning Publishing Council is a research and policy linkage initiative supported by the Bill and Melinda Gates Foundation and the John L. and James S. Knight Foundation whose goal is to understand the market dynamics and areas of innovation that are ready for scaling within the game-based learning field.

As part of the Council's work, a review of both current and past efforts in the games and learning area has been undertaken to help creators, entrepreneurs, practitioners, and policymakers understand important opportunities and challenges to integrating digital games into the current context of education policy reform and practice.

This brief takes a close look at the lessons learned from the informal learning "Edutainment" era. In the late 1980s and early 1990s, some of the best-selling video games included familiar titles such as *Where in the World is Carmen Sandiego?* and *The Oregon Trail*—products that not only set the standard for games as educational tools but also launched an entire industry of consumer products intended to both educate and entertain. Through the success of these titles and others, the edutainment industry blossomed, and the design, development and distribution of children's games became a growing industry that held promise both in terms of its educational potential and market opportunities.

However, in the late 1990s, a number of factors led to an industry downturn. Within about five years, edutainment went from a burgeoning market to somewhat of a dirty word within industry circles—a downward spiral that has had longstanding repercussions that still resonate strongly in the current market.

Today, publishers today tend to stay away from the word "educational" in the consumer video game space. In fact, one would be hard pressed to find a recent mainstream success story of a big budget video game in the consumer space that was designed, developed, and marketed as educational. There are many popular games that have substantial educational value—*Little Big Planet*, *The Sims*, and *Minecraft* to name a few. However, none of these games have been intentionally designed, developed and marketed as educational.

In casual conversations, developers and others in the consumer video games industry often attribute the edutainment industry downfall to either lack of market demand or difficulty in creating great products that both educate and entertain. Our research, which examined academic analyses, as well as contemporary financial and press reports and featured interviews with leading figures in the "edutainment era," has found a more nuanced depiction of what occurred. In reality, it was neither lack of demand nor a lack of quality products that tipped the video game edutainment market into a downward spiral; rather, it was massive consolidation combined with other key contextual forces such as the rise of mass-market retailers and accompanying downward-pricing pressures that led to the industry's demise.

This brief re-considers the "edutainment era" of children's educational software and reflects on how lessons from past efforts can inform current efforts to mobilize games for learning. Focusing on the consumer market, the report attempts to debunk some of the misconceptions around what happened to edutainment in the '90s, while simultaneously sharing valuable lessons learned from one of the most important periods in the history of games and learning.

The Rise

In the early 1980s, the availability and growing popularity of personal computers allowed for the birth of the consumer software industry. Educators and technologists saw an opportunity to use this new medium to help children learn, and a niche industry of educational software was born.

Creative minds drawn to the new medium explored a variety of approaches to learning games. A newly minted teacher, who joined forces with educational researchers at the University of Minnesota, and shortly thereafter The Minnesota Educational Computing Consortium (MECC), began to commercialize products such as *The Oregon Trail* and *Number Munchers*. Two brothers formed the idea to create a computer game that would get kids interested in geography, work that led to Broderbund launching the renowned *Carmen Sandiego* series in 1985. With original funding from a National Science Foundation grant, three educators and an Atari game designer founded The Learning Company, best known originally for the *Reader Rabbit* series. By the close of the decade, the edutainment market was booming.

Exhibit A: Early Edutainment Innovators & Notable Products	
mecc For the love of learning. 1973	The Oregon Trail; Lemonade Stand; Super Munchers The Challenge Continues...
Brøderbund 1980	Where in the World is Carmen Sandiego?; the printshop; mavisbeacon teaches TYPING
The Learning Company 1980	The Learning Company® presents READER RABBIT™; Rocky's Boots
Davidson. 1983	Math Blaster Episode One

These pioneers and others were influenced by emerging best practices in teaching and learning of the time period. These focused on active participation, open-ended learning, and constructivist learning principles (Ito, 2009). Akin to the early days of educational television, multidisciplinary teams at the intersection of education, research, and design led many of the initiatives. Early practitioners were inventing new forms, and even drill-and-practice games were infused with a new measure of creative energy and humor (Klopfer et al, 2009).

For both creators and consumers of these early products, each new title represented a novel step into unknown territory (Klopfer et al, 2009). *Math Blaster* took a standard drill-and-practice instructional mechanism, and embedded it within a shooter game archetype (Ito, 2009). *Rocky's Boots* was one of the first educational software products for personal computers to successfully use an interactive graphical simulation as a learning environment. *Where in the World Is Carmen*

Sandiego? established a unique formula involving a series of missions in which the user tracks Ms. Sandiego through a variety of geographical destinations, a theme that was cultivated in the product line for years to come.

The market for children's software designed to both educate and entertain was so ripe that it warranted its own name, and the term "edutainment" was born. By the late '80s, edutainment was a robust industry in which numerous publishers were thriving.

The Consolidation

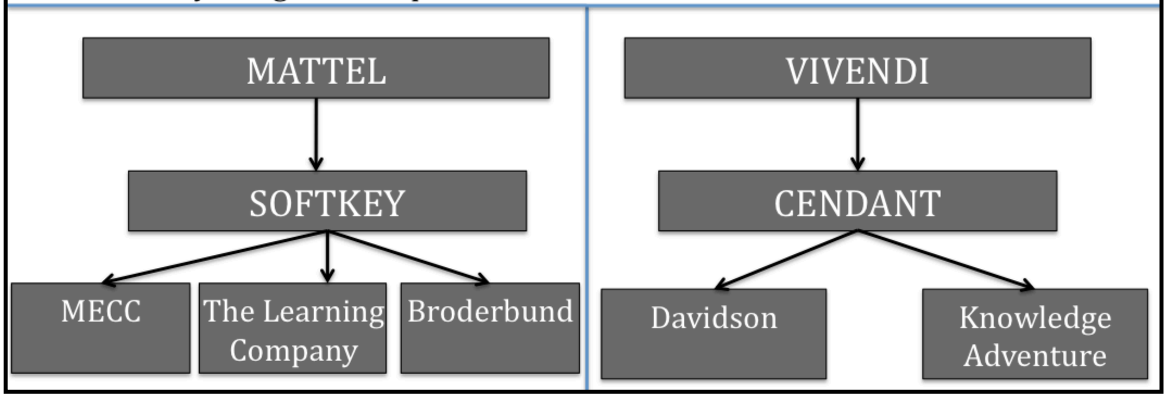
The early 1990s saw the emergence of a mass-market for consumer multimedia software. Multimedia software sales grew by 26% per year during the first few years of the decade (“The Learning Company,” 2004). Edutainment companies were a significant part of this growth. Broderbund became a public company in fall of 1991, and within a year revenues had increased by 25% to over $75 million (“Broderbund’s Net,” 1992). Requiring more capital for growth, the state of Minnesota spun off MECC as a private corporation in 1991, and an IPO followed in March 1994 (“The Learning Company,” 2004). Over the same time period, important players such as Knowledge Adventure and Riverdeep joined the ranks of the original pioneers. By the mid 1990s (as the industry began to consolidate), these small but successful independent developers became acquisition targets of larger software firms.

One firm in particular, SoftKey, played an extremely important role in consolidation. Canadian entrepreneur and investor Kevin O'Leary started SoftKey International for $10,000 in the late ‘80s, focusing on a wide variety of software intended for home audiences. By 1994, SoftKey was a billion-dollar consolidator in the software market, having acquired over sixty rivals such as WordStar and Spinnaker Software (“Shark Tank Deal,”).

In the fall of 1995, SoftKey announced that it had agreed to acquire a majority stake in MECC in a stock swap valued at $370 million[3]. Around the same time, The Learning Company’s success caught the eye of both SoftKey and Broderbund. A bidding war ensued between the two companies, with SoftKey eventually acquiring TLC for $606 million—over 10 times the companies’ revenue (Fisher, 1995; “The Learning Company,” 2004). SoftKey adopted The Learning Company's name and continued acquiring other software companies, including eventually Broderbund in 1998 for approximately $420 million in stock (“Educational Software,” 1998).

By the late 1990s, The Learning Company—with $850 million in projected revenues—was considered the world's second-largest consumer software company after Microsoft and one of the top three market share leaders in the entertainment software market (Junnarkar, 1998). However, many were skeptical about their aggressive acquisition binge. An analyst was quoted as saying, “They’re making a $1 billion investment in MECC and The Learning Company and the entire educational software business is only worth roughly $450 million" ("The Learning Company," 2004).

Exhibit B: Key Mergers & Acquisitions

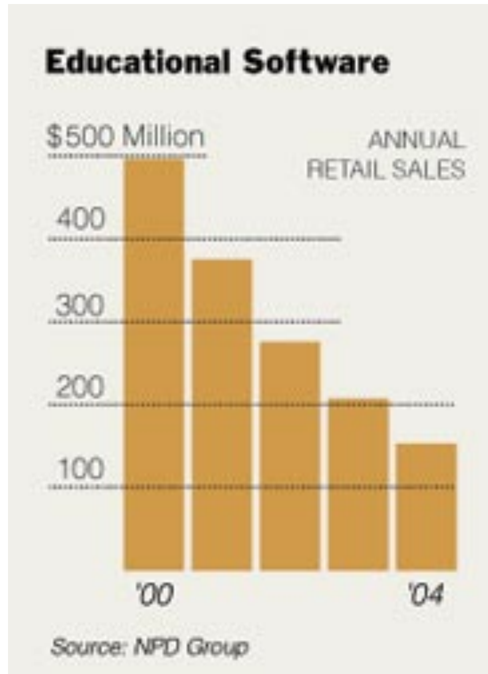


A mere four years later, The Learning Company again became the subject of an acquisition. Attempting to use a mergers and acquisitions strategy to keep pace with technology, Mattel was looking for a children's software company with a strong brand and more than $400M in annual sales. In 1999, Mattel acquired The Learning Company in a transaction valued at $3.8B (Tuck School of Business, 2002).

Aside from the series of The Learning Company acquisitions, other major important mergers and acquisitions were also underway. In 1996, Davidson was acquired by CUC International (later Cendant Software) and Cendant acquired Knowledge Adventure, best known for its *JumpStart* series of educational games ("CUC International," 1997). The company then sold its consumer software operations to French publisher Havas in 1998, the same year Havas was purchased by Vivendi. By the end of the 1990s, the children's software industry had largely consolidated under two giant conglomerates, one headed by Mattel and the other by Vivendi.

The Fall

The turn of the millennium represented the beginning of the end of the edutainment era, and the industry that reaped almost a half a billion dollars in annual retail sales in 2000 plummeted to $152 million in less than five years (NPD Group, as cited in Richtel, 2005). A number of factors led to this downturn.



Mass Market Retailers

Historically, consumer software titles were sold through specialty software stores. However, throughout the 1990s, other distribution channels emerged, and by the late 1990s the bulk of children's software was being sold at mass-market retailers such as Wal-Mart. Brick and mortar relationships and competitive price points became increasingly important. Mass merchants wanted to deal with no more than 20 suppliers and carry a maximum of 300 titles ("The Learning Company," 2004). As a result, small companies had difficulty forging relationships with these large retailers, and larger developers were forced to slow innovation in an effort to keep prices down and maintain shelf space.

Downward Pricing Pressure

A shift to mass-market distribution is typically accompanied by downward pricing pressure, and edutainment provides a perfect case in point. The average wholesale price of consumer multimedia titles dropped from $20 in 1993 to $11 in 1994 to under $10 in 1995 ("The Learning Company," 2004). The New York Times article that had announced SoftKey's acquisition of MECC and TLC foreshadowed continued downward pricing pressure in the edutainment space: "SoftKey is considered aggressive in its pricing and marketing, and analysts said the company's entry in the educational market would push prices lower" (Fisher, 1995). At this point, retailers were moving a significant amount of volume at low price points, and the market for educational software was essentially commoditized.

No Investment in New Products

Although product was moving, publishers weren't able to make enough money at these lower price points to invest in innovation, either in content or in format. The development context had shifted from small innovative efforts to a mainstream commercial enterprise with a primary focus on adhering to existing market demands such as low price points and licensed products.

The Learning Company Acquisition

In an attempt to keep pace with technology, Mattel acquired The Learning Company in a purchase that BusinessWeek called "one of the worst deals in recent memory" (Rosenbush, 2007). Mattel thought that this pricey acquisition would help diversify its business by giving the company a leading position in the consumer software market. In the third quarter of 1999, Mattel expected The Learning Company to post $50 million in profits. Instead it posted losses of $105 million (Tuck School of Business, 2002). By the end of the year, the company's losses were over $200 million. Mattel's CEO was famously forced to resign. Mattel sold The Learning Company to Gores Technology for nothing more than a percentage of future profits, ending the toy company's foray into educational software.

Lessons Learned

The rise and fall of the edutainment industry can inform our current efforts to mobilize games for learning. Below we attempt to document some lessons from this important time period.

Marketing and Distribution Matter

The edutainment era witnessed thoughtful and, at times, exemplary design and development models for games that could simultaneously educate, entertain, and engage children and youth. But as the market dynamics of the era demonstrated, the potential of games for learning lies not only in quality products, but also in a sound and sustainable infrastructure that includes effective marketing and distribution channels.

Understand Consumer's Value Perception

In the early days of edutainment, products sold for $30-$40 for a boxed title. After rapid market consolidation and significant capital investments, the same products were soon being sold for under $10 with additional mail-in rebates. The dramatic drop in prices was driven by a push to increase sales—not because consumers didn't value or purchase the products at higher prices—but because large companies and mass-market retailers were attempting a volume distribution strategy. As a result, consumers' perceptions of the value of educational software were dramatically reduced, and the industry was never able to recover. This is an extremely important point to consider in today's landscape where two of the main delivery mechanisms for games—the internet and mobile apps—are accompanied by an expectation of free or low-cost price points.

Caution Required: Balancing Act Between "Magic Bullets" and "Snake Oil"

Mobilizing new technologies for children's learning has often been accompanied by passionate and polarized debate. Skeptics often focus on a lack of evidence of efficacy while advocates simultaneously hype the latest magic bullet solution to stubborn educational challenges. These typically contentious views set a medium up for failure, as a technology in and of itself is not positive or negative. Rather, a new technology is an additional tool that is defined by what we use it for. It is the content that is produced and the context in which it is used that makes it a positive or negative force in children's lives. As Ito has articulated, the Edutainment story is a prime example of a "new technology that was accompanied by a set of heightened expectations, followed by a precipitous fall from grace after failing to deliver on unrealistic expectations" (Ito, 2009).

Beware False Labels

While the term edutainment may have eased communication between specialists for a time, it became a buzzword that was used in a more general way, sometimes inaccurately or inappropriately. Today's use of the term "gamification" conjures a similar concern. Once the nomenclature used to describe a line of products that fundamentally may vary becomes trendy, developers risk market failure if they cannot distinguish the medium from the content.

Be Intentional in Addressing the Educational Need

As Ito has documented, early developers of children's software hoped to deliver educational tools to children in need, capitalizing on widespread technology access to reach a population that was largely underserved. Instead, in many cases children's educational software fueled anxiety (and thus purchases) among wealthier parents, enticing them with names like "jumpstart" which stressed the need to get ahead (Ito, 2009). To have a positive impact on educational equity, educational media must be both innovative and intentional, not only in terms of content but also in marketing and distribution efforts. Quality products available at low cost did not assure that children in need would capitalize on the best of the industry's efforts.

Do Not Let the Medium Become the Product

Throughout the edutainment era, in many ways the CD became the product, rather than merely the delivery mechanism. Parents and teachers purchased "educational CD-ROMs", not "educational games", "educational references", or "multimedia guides" (Klopfer et al). Though the CD-ROM was simply a method for delivering educational and entertainment content of many kinds, "educational CD-ROM's" as a group became a much-hyped instrument for learning. This caution should apply to mobile apps today. Again, it is important to separate the medium from the content.

Conclusion: Debunking Myths

The dramatic rise and fall of children's educational software has had enduring repercussions on the video game industry: publishers today typically avoid educational titles in the consumer game space. Is there a new opportunity that they are missing? This final section argues that yes, there is, by surfacing three key myths about why edutainment experienced such a drastic downfall.

Success in Both the Consumer and Institutional Markets *is* Possible

The consumer and institutional markets are drastically different, and there is a widespread assumption that it is impossible to design, develop and distribute a product targeted at these vastly different settings. While this approach is certainly challenging, the Edutainment era produced a few examples that succeeded in both settings. Most notably, *The Oregon Trail* had significant popularity in both the consumer and institutional markets and is probably the most widely cited success in learning games for the K-12 market. Forty years after its inception, the game has sold over 65 million copies worldwide (Lussenhop, 2011), and is now available on current mediums as both a Facebook game and iOS App.

Games can be Fun *and* Educational

Developers and others in the consumer video games industry often attribute the edutainment industry downfall to the fundamental difficulty of creating great products that both educate and entertain. The edutainment era debunked this myth. It birthed a number of titles that are still cited today as best in class—not just as educational games, but simply as great games, including *Where in the World is Carmen Sandiego?, The Oregon Trail, and The Logical Journey of the Zoombinis,* to name just a few. These games show that it is possible to intentionally create a game that is both educational and fun.

There is Demand for Quality Learning Products

Probably the single most important lesson learned from the edutainment era is the fact that demand *is* there for quality consumer products that both educate and entertain. The destruction of the market was not due to a lack of demand, but rather other market forces that created insurmountable obstacles from a business perspective. The explosion of educational apps and games for children is the latest indication that demand for high quality digital learning products exists. The real challenge remains in creating sustainable market incentives for building an effective supply chain.

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Appendix A: Key Companies from the Edutainment Era

The Learning Company (TLC)

Best known initially for its blockbuster *Reader Rabbit* series, The Learning Company (TLC) was founded in 1980 by three educators and an Atari game designer with original funding from a National Science Foundation grant (plus additional venture capital). In 1995 TLC became an acquisition target for larger software firms Broderbund and SoftKey. After a bidding war, SoftKey acquired TLC for $606 million and subsequently acquired the company's name. Mattel then purchased TLC in 1999 for $3.8 billion, renaming it "Mattel Interactive", holding it only until 2000, when the toy maker offloaded the company to private acquisitions firm Gores for $27.3 million. In 2001, Gores sold TLC's entertainment holdings to Ubisoft and other properties to Riverdeep/HMH. TLC is now a subsidiary of HMH.

Broderbund

Best known for its *Where in the World is Carmen Sandiego* series of games, Broderbund Software, Inc. is an American maker of video games and educational software such as *Living Books, Myst,* and *Mavis Beacon Teaches Typing,* as well as the popular *The Print Shop* series of productivity tools. Broderbund was purchased by TLC in 1998, but continues to sell legacy software under the Broderbund name.

Riverdeep

Principally the creation of the Irish ex-investment banker Barry O'Callaghan, Riverdeep was founded in 1995. In October 2002, plummeting stock forced the company to become a private entity. In the end of 2006, Riverdeep PLC bounced back, acquiring publisher Houghton Mifflin for $1.75 billion in cash and $1.61 billion in assumed debt, creating a new joint enterprise called the Houghton Mifflin Riverdeep Group. The newly formed venture would capitalize on the "convergence of print and digital education platforms", and retain Tony Lucki, formerly of Riverdeep as Houghton Mifflin's CEO. In July 2007, Reed Elsevier (an information and publishing group) offloaded Harcourt U.S.'s Schools Education business to Houghton Mifflin, Inc. for $4.0 billion, with $3.7 billion payable in cash and $0.3 billion payable in common stock of Houghton Mifflin, Inc. Houghton Mifflin was privately held. Existing investors put up $23 million of equity financing to help to meet the $3.7 billion cash requirement for the purchase. Reed took a $300 million stake in Houghton Mifflin, Inc., which left it with 11.8 per cent of the common stock in the enlarged company. The combined business became known as Houghton

Mifflin Harcourt (HMH), and a new holding company, EMPG, was created. The Riverdeep name is no longer used by HMH.

SoftKey

Formed in entrepreneur Kevin O'Leary's basement on a $10,000 investment from his mother, Canadian company SoftKey is a producer of primarily home-use software, especially game compilation discs. By 1994, SoftKey had become a billion-dollar consolidator in the educational software market and acquired no less than sixty rivals, including WordStar, Broderbund and Spinnaker Software. In 1995, SoftKey purchased The Learning Company (TLC) for $606 million, moved its headquarters to Boston, and took The Learning Company as its name.

MECC

Founded in 1973 by educational researchers at the University of Minnesota, The Minnesota Educational Computing Consortium (MECC) is the maker of the popular *The Oregon Trail* and *Number Munchers* learning software. Originally funded by the State of Minnesota, MECC became financially successful and dominated the market for Apple II software used within schools. In 1991, facing an internal directive toward growth designed to infiltrate the home market, the company was spun off as a private corporation to venture venture capital fund North American Fund II for $5.25 million. An IPO followed in March 1994, and the publicly traded company (with about $30 million in annual revenue, about one third of which derived from *The Oregon Trail*) was acquired by SoftKey for $370 million in stock. *The Oregon Trail* still lives on as part of The Learning Company, as of 2011, more than 65 million copies of the software had been sold

Davidson & Associates

Former teacher Jan Davidson founded Davidson & Associates in 1983, developing titles such as the perennially best-selling *Math Blaster*, CUC International acquired the company in 1996, then quickly merged with Knowledge Adventure, best known for its *JumpStart* series of educational games.

Knowledge Adventure

Best known for its *Adiboo, JumpStart* and *My First Encyclopedia* series of educational titles, Knowledge Adventure, Inc. was established in the late 1980s in Los Angeles, then later merged with another Davidson & Associates during the late 1990s.

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