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**Transmedia Storytelling for the Digital Generation:
A Guide for Self-Publication with the Adobe® Digital Publishing Suite**

Thesis submitted in partial fulfillment of Honors

By

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The Honors College

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East Tennessee State University

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Abstract

Despite educational reforms, the annual results from the National Assessment of Educational Progress continue to indicate that the majority of American fourth-graders struggle to master the crucial skill of reading. In the last decade, the percentage of students who read at or above a proficient level hovers around 30 percent, which draws attention to the fact that the academic institutions may not be fully to blame for the decline of reading competency (NAEP, 2011). The real reason for the incompetency could be attributed to the amount of time that children spend reading as average fourth-graders spend less than two hours a week reading (Juster, Ono, & Stafford, 2004, p. 11). This Digital Generation lives in a world full of distractions in which reading cannot compete. Although the American educational system is stressing reading instruction, children are not putting what they are learning into practice outside of school. Instead of reading, children immerse themselves into the world of interactive digital media and electronic devices. If children do not increase the time they spend reading, their proficiency will not improve. To revive reading within the Digital Generation, authors of children's literature may need to reevaluate their role in the literacy problem because their traditional print-form content appears to be unsuccessful in reaching their young audience. To create reading material that children are eager to read, authors need to produce content in a format that will entice a response from the newest generation. One way children's authors can accomplish this is by publishing transmedia storytelling ecosystems. By combining storytelling with digital media to meet the modern literary needs of today's children reading proficiency should begin to improve, along with a renewed interest in literature. This research provides insight into today's "digital

children” and suggests a methodology for creating transmedia literature using the Adobe® Digital Publishing Suite.

Keywords: Digital Generation, transmedia storytelling ecosystem, Adobe® Digital Publishing Suite, reading proficiency, digital singularity, neuroplasticity

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Introduction

Reading in America

According to *Read or Not to Read: A Question of National Consequence* by the National Endowment for the Arts (2007), “The shameful fact that nearly one-third of American teenagers drop out of school is deeply connected to declining literacy and reading comprehension.” When students master reading in their elementary education, they excel academically and later vocationally. However, if they fail to become proficient readers, they may struggle with “lack of employment, lower wages, and few opportunities for advancement” according to another National Endowment for the Arts research study, *Reading at Risk: A Survey of Literary Reading in America* (2004). To ensure that the American educational system vigorously instills reading proficiency to avoid this worrisome fate, representative samples of fourth-graders annually participate in the National Assessment of Educational Progress to evaluate their achievement levels (NAEP, 2011). The National Assessment tests students’ “competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter” (NAEP, 2011). Students who display satisfactory knowledge and competency indicate a proficient achievement level while those who demonstrate only partial mastery fall into the basic level of reading ability. In 2000, the National Assessment of Educational Progress found that 71 percent of the surveyed students read below standard of proficiency (NAEP, 2011). This startling inadequacy led to the creation of the Reading First program by the No Child Left Behind Act of 2001 (Wright, n.d.). This educational initiative mandated that reading instruction focus on phonemic awareness, phonics, fluency, vocabulary, and comprehension in order to have all students proficient by end of the third grade (Wright, n.d.). The overemphasis of the five phonic skills led to “no statistically

significant impact on reading comprehension scores in grades one, two, or three,” according to the director of the Institute of Education Sciences, Grover Whitehurst (Glod, 2008).

Currently, the results of the 2011 National Assessment of Educational Progress indicate that proficiency is 5 percent higher than it was eleven years ago with 34 percent of fourth-graders reading at or above a proficient achievement level (NAEP, 2011). This means a majority of students still struggle with reading comprehension even after Reading First’s dramatic changes in the elementary educational system.

A New Breed of Children

The national program’s lack of success draws attention to the fact that America’s academic institutions may not be fully to blame for the decline of young readers’ competency; the real reason for the incompetency is the amount of time that children spend reading. On average, American fourth-graders spend less than two hours a week reading while they spend over fourteen watching television (Juster, Ono, & Stafford, 2004, p. 11). This Digital Generation lives in a world full of distractions in which reading cannot compete. Although the American educational system is stressing reading in school, children are not putting what they are learning into practice outside of school. If children do not increase the time they spend reading, their proficiency will not improve.

The Role of Authors

During the last century, children’s literature remains predominantly unchanged as most authors still rely on text, linear storytelling, and paper to deliver reading material to their young audience. However, America’s newest generation lives in an era of fading print and rapidly evolving technology so the practice of reading books remains on the shelf while children

immerse themselves into the world of multimedia entertainment and digital devices.

Consequently, problems with reading proficiency may stem from children's literature instead of the educational system. Authors need to challenge the Digital Generation who sees reading as a dull chore by creating literature that excites the young audience and encourages them to develop a lifelong love of literature. By address their role in the problem; authors can work towards a solution for improving reading proficiency.

Literature for the Digital Generation

In order to create literature for the Digital Generation, authors must first understand their audience. This means authors recognizing the current generational differences including, technology's influence on behavior, and the neurological effects of growing up in the Digital Age. Once they reconnect with young readers, they can then design literature to fit their learning style and media habits. Authors can create highly interactive and immersive literary work using transmedia storytelling. Transmedia storytelling is one readily available method that involves telling a single story using multiple types of media and technology. Adobe® Digital Publishing makes it possible to produce literature that can truly engage the Digital Generation.

Part I: Transmedia Storytelling for the Digital Generation

Chapter 1: The Digital Generation

The Newest Generation

Born between 1995 and 2012, the Digital Generation is an emerging population of 23 million children living with the advantages of 21st Century technology (Schroer, n.d., p. 3). Although other names such as Generation-Z, Generation-Net, and Millennials apply, the title of ‘digital’ is very appropriate for these tech-savvy individuals (Prensky, 2006, Chapter 4, Section 1, para. 8). According to *Understanding the Digital Generation: Teaching and Learning in the New Digital Landscape*, today’s children surround themselves with “computers, digital video, cell phones, video games, the Internet, online tools, and all the other digital wonders that increasingly define their world” (Crockett, Jukes, & McCain, 2010, Introduction, para. 4). Due to these sophisticated surroundings, the Digital Generation dramatically differs from any previous generation.

Digital Singularity

Before 1995, the differences between generations were largely superficial, such as differing hairstyles, clothing choices, and words usage. Now, radically differing styles of communication, learning, and thinking have developed with the birth of the Digital Generation. The stark difference in generational behaviors introduces the phenomenon of digital singularity, which occurs when a fundamental shift in behavior continues to advance and will not regress (Prensky, 2006, Chapter 4, Section 1, para. 3). This means that older individuals will not thrive in modern society unless they adopt the behaviors of the younger generation.

Digital Natives and Digital Immigrants

Two ideologies have emerged from the growing generational gap. Today's children are digital natives because they innately understand the digital language of technology (Prensky, 2006, Chapter 4, Section 1, para. 8). This innate knowledge is not present in earlier generations which results in many adults "struggling to keep up as they try to come to terms with the rapid change, powerful new technologies, and changes in thinking" according to *Understanding the Digital Generation: Teaching and learning in the new digital landscape* (Crockett, Jukes, & McCain, 2010, Introduction, para. 5). These adults are digital immigrants because they must migrate to digital methods after spending most of their lives relying on nondigital forms of information gathering, entertainment, and communication.

Behaviors of Digital Immigrants (Adults)

- Purchases physical copy of a film at a store
- Buys physical copy of a book that was verbally recommended by a friend
- Calls sibling to wish happy birthday
- Uses a phone strictly for communication

Behaviors of Digital Natives (Children)

- Buys a subscription to an online streaming site
- Buys eBook because it has good customer reviews and a mention on a popular blog
- Sends animated eCard from online service
- Uses a phone for communication and entertainment

The Generational Disconnect

A disconnect forms between authors and young readers as the older generation attempts to create literature for a childhood that they do not understand and from the popular belief that adults understand all childhood experiences because they were once children themselves. Since previous generations did not grow up with the Internet or video games, authors are unaware of

what matters to young readers. Authors' lack of knowledge of the modern childhood leads to the creation of underwhelming content that does not entice the intended audience to read.

The Reading Glitch of the Digital Age

Reading at Risk: A Survey of Literary Reading in America (2004) by the National Endowment for the Arts found that “less than half of the adult American population reads literature” and that “young adults have declined from being those most likely to read literature to those least likely”(p. 9-11). Author Marc Prensky, who is the inventor of the term “digital native”, attributes this decline to the amount of time today’s children spend with other forms of media. In his book *Don’t Bother Me Mom-I’m Learning!* (2006), Prensky says by the time they turn twenty-one the Digital Generation will have played more than 10,000 hours of video games, talked 10,000 hours on cell phones, and watched more than 20,000 hours of television while reading less than 5,000 hours (Chapter 4, Section 1, para. 4). *Understanding the Digital Generation: Teaching and Learning in the New Digital Landscape* (2010) explains the obvious shift away from reading with the simple reason of “modern readers, especially young modern readers, are finding other things to do with their time rather than read short stories and novels” (Crockett, Jukes, & McCain, 2010, Chapter 11, Section 6, para. 2).

Chapter 2: Influences of the Digital Age

The Digital Generation's Relationship with Technology

To revive reading and improve comprehension skills, authors must understand how the high-tech environment of modern America influences the Digital Generation. Due to their surroundings, children learn and interact with media differently than previous generations. By gaining a better insight into the newest generation's relationship with technology, the inadequacies of print become clear as authors understand the literary needs of today's children.

According to *Reading at Risk: A Survey of Literary Reading in America* (2004) by the National Endowment for the Arts, the Digital Generation's "participation in a variety of electronic media, including the Internet, video games, and portable digital devices" leads to a media competition for children's attention. The Pew Internet and Life Project study *Teens and Social Media* (2007) focused on this media participation, and found that about 93 percent of teens use the Internet and 82 percent of children play video games (Lenhart, Smith, & Macgill, 2007). The percentage of children playing video games breaks down further to "one-half of all 4-to-6 year old children and three-fourths of teenagers play video games on handheld devices, computers, or consoles several hours a day, several times a week" according to the same *Teens and Social Media* study (Lenhart, Smith, & Macgill, 2007). Although electronic gaming is not new, the Digital Generation's profuse participation shows how important video games are to American children.

The Influence of Gaming

In the 1970s, Pong®, Space Invaders®, and many others titles introduced the world to electronic gaming (Crockett, Jukes, & McCain, 2010, Chapter 3, Section 10, para. 1). In the years since the creation of these simple games, modern gaming has become a \$30-billion-a-year industry that appeals to consumers of all ages and social groups (Prensky, 2006, Chapter 6, Section 21, para. 1).

Unlike the simple games of the 1970s, today's gaming market mostly consists of complex games that encourage players to interact with immersive storyworlds and well-developed characters. In order to win complex games, players must invest hours and learn a variety of unique skills (Prensky, 2006, Chapter 7, Section 4, para. 2). Bruce Shelly, the head game designer at Ensemble Studios, defines this notion of complexity as "a series of interesting and important decisions, leading to a satisfying conclusion" (Prensky, 2006, Chapter 7, Section 10, para. 1). As the concept of complexity continues to evolve, gaming increasingly influences in modern life.

Modern gaming offers an interactive experience where children make decisions, give creative input, and solve problems. Children develop a sense of power and freedom as they decide what information is important, which tasks to complete, and in what order to handle decisions (Prensky, 2006, Chapter 2, Section 1, para. 8). This empowerment engages young players and causes them to seek similar interaction from other forms of media.

Gaming negatively affects the Digital Generation's interest in reading. According to Marc Prensky's *Don't Bother Me Mom-I'm Learning!* (2006), the lack of interaction from literary works causes children to "power down" and disconnect from the content because they

are unable to participate as they normally would (Chapter 2, Section 3, para. 1). Due to the influence of gaming, modern children prefer media that offers unforced learning, multitasking, and trial-and-error learning. Authors must understand the Digital Generation's preferences and the shortcomings of traditional print media in order to create literature that engages today's children.

Unforced Learning

The Digital Generation prefers to learn when they are not forced to do so (Prensky, 2006, Chapter 1, Section 2, para. 6). They like to have the choice of what information to learn and how to utilize it. This preference of unforced learning develops from playing complex video games where players unconsciously learn skills such as map reading, team leadership, and strategy to complete tasks. In these games, children control the flow of information. Print media, in contrast, restricts the presentation of information to an unchangeable, linear format.

Multitasking

Due to the influence of gaming and their fast-paced environment, the children of the Digital Generation are born natural multitaskers who actually learn better when switching between activities (Prensky, 2006, Chapter 4, Section 2, para. 5). This behavior can be as simple as listening to music while reading a game introduction or more complex, like communicating with team members while battling characters in a multi-player game. Unlike the singular nature of print, media that allows for multitasking more effectively engages this young audience.

Trial-and-Error Learning

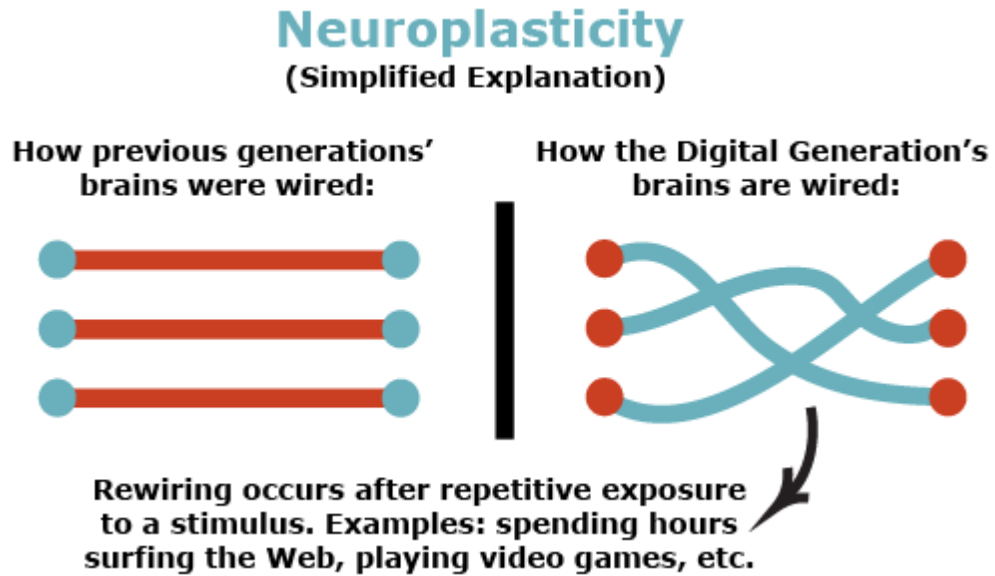
The preference of trial-and-error learning also emerges from the Digital Generation's love of gaming (Prensky, 2006, Chapter 2, Section 1, para. 6). Today's children often learn by experimenting instead of reading manuals or asking for instructions. This preference comes from task-orientated gaming and the players' ability to restart a video game to reattempt a problem. Complex video games allow children to approach a problem in different ways in order to find their own solution (Prensky, 2006, Chapter 2, Section 1, para. 6). Print media, on the other hand, simply delivers an explanation without allowing readers to think creatively or experiment.

Chapter 3: The Digital Brain

Neuroplasticity

Earlier generations do not share the modern preferences of unforced learning, multitasking, and trial-and-error learning because these specific preferences stem from how children's brains develop in relation to their environment. Dr. Bruce Berry of Baylor College of Medicine explains, "Different kinds of experiences lead to different brain structures" (Prensky, 2006, Chapter 4, Section 1, para. 5). The differences between the generations are now known to be neurological as research finds that habitual use of technology heavily impacts the brain structure of modern children. Authors must understand these neurological differences in order to create adequate literature for America's youth.

In the last twenty-five years, neuroscience research has disproved the permanence of the brain's internal wiring, and discovered that neural pathways change when the brain undergoes long exposure to stimulus (Prensky, 2006, Chapter 5, Section 2, para. 2). This newly discovered malleability is referred to as neuroplasticity. *iBrain: Surviving the Technological Alteration of the Modern Mind* explains that neuroplasticity occurs when "daily exposure to high technology-computers, smart phones, video games, search engines like Google and Yahoo- stimulates brain cell alteration and neurotransmitter release gradually strengthening new neural pathways in the brain while weakening old ones" (Small & Vorgon, 2008, p. 1).



The rewiring of the Digital Generation's brain structure naturally happens as today's children willingly participate in long, repetitive sessions of technological stimulus (Small & Vorgon, 2008, p. 1). Previous generations all share the same internal wiring because few activities before the 1970s held children's attention for long periods of time. Today, it is not uncommon for children to spend up to seven hours a day playing video games or surfing the Web, which exemplifies why neuroplasticity easily occurs within the newest generation (National Endowment for the Arts, 2004, p. 9-11).

Because of neuroplasticity, there are three crucial neurological differences between the Digital Generation and all previous generations. Unlike their predecessors, today's children tend to be right-brain thinkers who have strong visual thinking skills and visually selective attention (Small & Vorgon, 2008, Chapter 4). Since the American educational system does not cater to the digital brain, the current standard of reading instruction and material continues to be inadequate for the Digital Generation.

Right-Brain Thinking

The primary difference between the Digital Generation and previous generations is that children today are more often right-brain thinkers. In *A Whole New Mind*, the author Daniel Pink says, “The right side of the brain specializes in seeing many things at once- seeing all the parts of geometric shape and grasping its form or seeing all the elements of a situation and understanding what they mean” (Pink, 2005, p. 19). Because of this tendency of right-brain thinking, modern children think creatively, put pieces together as whole elements, and easily derive the significant meaning from information (Crockett, Jukes, & McCain, 2010, Chapter 8, Section 4, para. 8). The Digital Generation’s creative talents thrive in the world of interactive media, but flounder in the educational setting.

Due to the historic influence of the Industrial Revolution, the American educational system still teaches reading using left-brain methods such as memorization and text-based literature. During the Industrial Era of the 19th Century, only authority figures needed higher-order thinking skills while workers of the numerous factories and mills merely needed basic skills to complete repetitive tasks (Crockett, Jukes, & McCain, 2010, Chapter 7, Section 7, para. 1). America’s massive need for manufacturing labor meant that most students entered the workforce immediately after receiving a basic education (Crockett, Jukes, & McCain, 2010, Chapter 7, Section 7, para. 1).

In the 21st Century, America’s economy embraces creative, right-brain thinking as technology and intellectual property become the country’s leading exports (Pink, 2005, p. 19). The American educational system heavily focuses on the left-brain methods of text and

memorization even more since the implementation of the No Child Left Behind Act and its initiative of the Reading First program.

Visual Thinking

Due to this sophisticated environment, today's children develop superior visual thinking skills. These advanced skills mean that children quickly decipher the meaning of graphics, symbols, videos, and other media without needing to refer to the accompanying text for an explanation (Crockett, Jukes, & McCain, 2010, Chapter 3, Section 17, para 4). In contrast, previous generations primarily rely on text to understand information and use images to draw context for secondary information (Crockett, Jukes, & McCain, 2010, Chapter 3, Section 17, para 5). Authors need to embrace the fact that communicating through imagery greatly improves reading comprehension for the Digital Generation.

Visual Selective Attention

Visual selective attention is the ability to focus on one element in a distracting environment and is also the neurological difference that truly sets the Digital Generation apart from its predecessors (Prensky, 2006, Chapter 2, Section 1, para. 4). Today's children do not receive information in a linear thought process. Instead they multitask, and pull significant details out of the flood of information. University of Rochester neuroscientists Shawn Green and Daphne Bavelier say that activities like video games and television are what develop this attention type (Prensky, 2006, Chapter 2, Section 1, para. 4). This means that children easily understand complex digital media while print underwhelms them.

In Malcolm Gladwell's *The Tipping Point: How little things can make a big difference* (2000), the psychologist Elizabeth Lorch describes an example of children's visual selective

attention in a Sesame Street® research experiment. In the experiment, researchers divided a group of children into two rooms: one empty room and one room filled with toys. As both groups watched the same television program, researchers found that the children in the toy room watched the show 47 percent of the time while the group in the empty room watched 87 percent of the time (Gladwell, 2000, p. 101). When the groups were tested for comprehension, Lorch found that both groups scored the same which “led to the conclusion that the 5-year olds in the toys group were quite strategically distributing their attention between toy play and viewing so that they looked at what was for them the most informative part of the program” (Gladwell, 2000, p. 101).

Chapter 4: Transmedia Storytelling

The Lack of Reading

In 2011, the National Assessment of Educational Progress found that 66 percent of the sampled fourth-graders read below the proficient achievement level (NAEP, 2011). Although these results might make American students appear undereducated or dimwitted, the children of the Digital Generation are actually very intelligent. Most parents can attest to this as they see their young children quickly master technology while many adults struggle with technology illiteracy. Consequently, America's educational system is not fully to blame for the poor assessment results because the real problem is the Digital Generation's lack of reading.

By the time they turn twenty-one, the Digital Generation will play over 10,000 hours of video games and only read about 4,300 hours (Prensky, 2006, Chapter 4, Section 1, para. 4). This means American children spend a massive amount of time interacting with technology, but rarely practice the skills they learn in school. Unless children begin to read more, the national change of the American educational system will all be for naught.

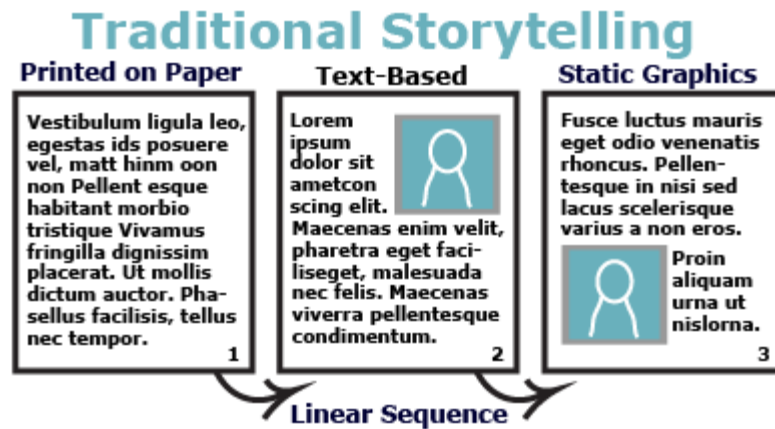
Instead of clinging to linear storytelling and print, authors need to redesign literature specifically for the Digital Generation. By incorporating a new method of storytelling and different media forms, authors can create content that children actually want to read. This digital solution for the stagnation of children's literature is transmedia storytelling ecosystems.

Explaining Transmedia Storytelling

In *Getting Started with Transmedia Storytelling*, Robert Pratten says, "Transmedia storytelling is telling a story across multiple media and preferably, although it doesn't always happen, with a degree of audience participation, interaction or collaboration" (2010, Chapter 1,

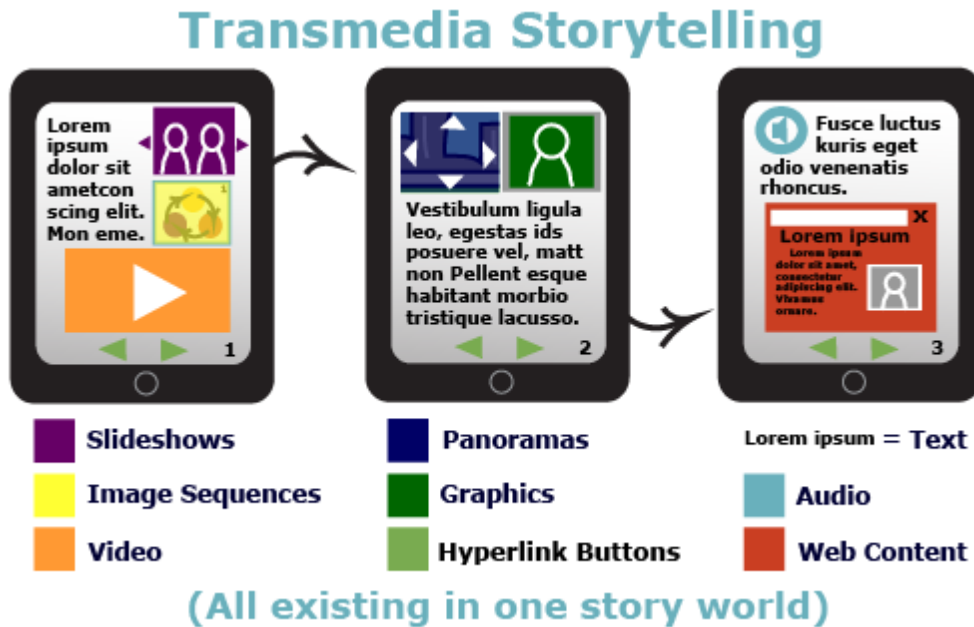
Section 1.2, para. 1). This means that authors use more than just print to tell a story. By using different media platforms, authors create a story-world that allows the young digital-natives to interact with the storytelling. This transmedia approach dramatically differs from the traditional method of telling stories.

With traditional storytelling, authors tell stories in a linear sequence with static graphics and text to guide readers through the plot. Readers are passengers as they wait for the story to unfold. They do not have the ability to decide how to utilize the information they read, and interact with the story content. For this reason, traditional storytelling is obsolete for the Digital Generation. Today’s children thrive in the interactive world of digital media, but are disinterested in print.



The solution to this alarming disinterest in reading is transmedia storytelling, which uses several media platforms and reader involvement to deliver an intricate and immersive story. According to Robert Pratten’s *Getting Started with Transmedia Storytelling*, “Telling stories across multiple media- transmedia storytelling- allows content that’s right-sized, right-timed and right-placed to form a larger, more profitable, cohesive, and rewarding experience” (2011, Chapter 1, Section 1.4, para. 4). Transmedia storytelling expands past print and combines media

like web content, electronic books (eBooks), games, music, and applications to tell a story within one encompassing storyworld called an ecosystem (Pratten, 2011, Chapter 2, Section 2.4.2.2, para. 1).



Components of Transmedia Storytelling Ecosystem

Robert Pratten explains in *Getting Started with Transmedia Storytelling* (2011) that the storyworld narrative, reader participation, gaming element, and the real-world connection are the four components that embody the transmedia storytelling ecosystem (Chapter 2, Section 2.2, para. 1). By emulating elements of games and the Internet, authors can create an experience that allows children to engage with reading the same way they do with other forms of media.

Storyworld Narrative

Since the emergence of transmedia storytelling, a “story” communicates a linear sequence of events that progresses without interference from the reader while a “storyworld” is the environment with a specific theme and set of characters which allows reader to navigate

through information and control the sequence of events. The storyworld narrative is the first component of transmedia storytelling ecosystem (Pratten, 2011, Character 2, Section 2.2, para. 2).

With traditional storytelling, following the linear sequence of the story is crucial to the understanding the plot. This approach is not enjoyable for young readers, and often they lose interest at the slow pace. Transmedia storytelling places more emphasis on the storyworld instead of the story, so children have more control while reading (Pratten, 2011, Character 2, Section 2.2, para. 2). They can choose how and where they gather information because the storyworld spreads across different media platforms. Each child's reading experience is unique as they navigate the ecosystem.

Reader Participation

The second transmedia storytelling ecosystem component is the importance of reader participation (Pratten, 2011, Character 2, Section 2.2, para. 1). Because a transmedia ecosystem incorporates interactive media like games, applications, and web pages, young readers make decisions, control outcomes, and actively participate in the storyworld. By including reader participation, authors encourage children to immerse themselves in the literature.

Gaming Element

The element of gaming is the third transmedia storytelling ecosystem component (Pratten, 2011, Character 2, Section 2.2, para. 1). Gaming encourages children to work towards a goal to achieve a higher level or skill, which encourages young readers to work towards gaining reading comprehension or gathering more information within the storyworld. With the inclusion of gaming, transmedia storytelling can spark an interest with the Digital Generation.

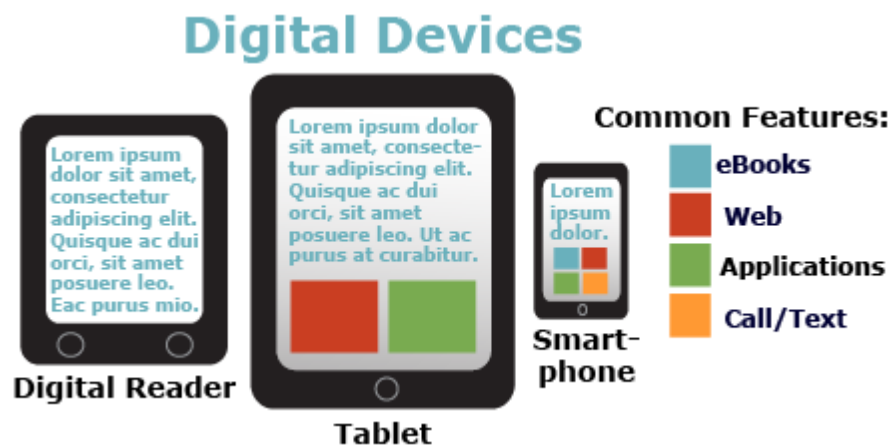
Real-World Connection

The fourth transmedia storytelling component is the importance of the real-world connection (Pratten, 2011, Character 2, Section 2.2, para. 1). Children from all generations respond better to stories that involve people, places, and events from their own lives, which they can personally relate to. Forming this connection is difficult for the Digital Generation because their technological world rapidly changes. Once a book is printed, the information is often irrelevant which creates a boundary between young readers and the content. Print cannot keep up with the world of America's youth, but transmedia can because it is able to incorporate updated media like web pages, social networking sites, and blogs.

Part II: A Guide for Self-Publication with the Adobe® Digital Publishing Suite

Chapter 5: Adobe® Digital Publishing Suite**The Boom of Digital Devices**

Today, digital readers, tablets, and smartphones are standard personal devices for many American consumers. Digital readers only display electronic books (eBooks) while tablets have interactive applications and Internet access, as well as eBooks. According to the Rise of E-Reading research study from the PEW Internet & American Life Project, 19 percent of Americans own a digital reader or tablet (Rainie et al., 2012). Smartphones, on the other hand, are mobile phones with Internet access, interactive applications, and eBooks. The 2012 Nielsen article “America’s New Mobile Majority: a Look at Smartphone Owners in the U.S.” says that 50.4 percent of Americans own smartphones (Nielsen, 2012). As the popularity of digital devices grows, the demand for digital content such as eBooks and applications dramatically increases. This demand creates an opportunity for children’s authors in the digital world.



Self-Publishing for Digital Devices

The boom in digital devices not only benefits readers; it also presents new opportunities for authors. Self-publication software allows authors to produce digital content from their own homes. Although there are many methods of self-publication, a new software development from Adobe® Systems Incorporated now allows authors to easily self-publish transmedia content to meet the growing media needs of the Digital Generation.

Introduction to Adobe® Digital Publishing Suite

The Adobe® Digital Publishing Suite allows authors to design digital publications, which blend the reading component of eBooks with the interactive component of applications. With this groundbreaking software, authors can create transmedia ecosystems by combining text and static graphics with multimedia elements such as video, music, and the web within digital publications (Adobe® Systems Incorporated, 2011). Not only can authors produce literature that engages digital natives, but they can also self-publish without any programming knowledge for app creation, and without going through the daunting publishing process of a corporate publisher. The Adobe® Digital Publishing Suite makes creating a transmedia storytelling ecosystem an easily available option for self-publishing authors.

The Current Market

Since the development of Adobe®'s self-publication software in 2010, 961 digital publications are on the market as of April 2012 “Digital Publishing Gallery” (Adobe® Systems Incorporated, 2012). A majority of the current publications are magazines such as The New Yorker®, Vogue®, and Martha Stewart Living® (Kuo, 2012, Introduction). This new platform easily allows for literary works like magazines to take on a new life as text fuses with

multimedia. Although magazines have quickly adopted the form of the digital publication, children's literature has not. Surprisingly, if a user searches for the keyword 'children' in the Adobe® Digital Publishing Gallery only twenty-six publications come up as of April 2012 (Adobe® Systems Incorporated, 2012). These digital publications are mostly educational books, not storytelling content.

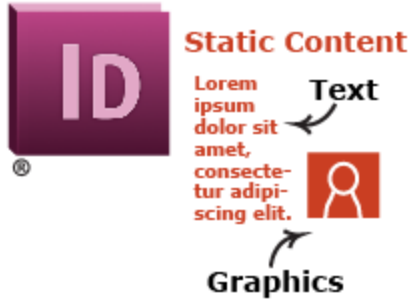
Digital Publication Process

To begin the digital publication process, authors start their design in Adobe® InDesign CS5.5 or 6 by laying out all of the static elements such as print or graphics (Kuo, 2012, Chapter 2). Then they must add dynamic elements such as video or hyperlinks to their InDesign document with the Adobe® Digital Publishing interactive overlays (Kuo, 2012, Chapter 2). After the design process, authors must then render their InDesign files through one of Adobe®'s Digital Publishing options to render a digital publication for distribution (Kuo, 2012, Chapter 1).



Digital Publication Process (Simple Explanation)

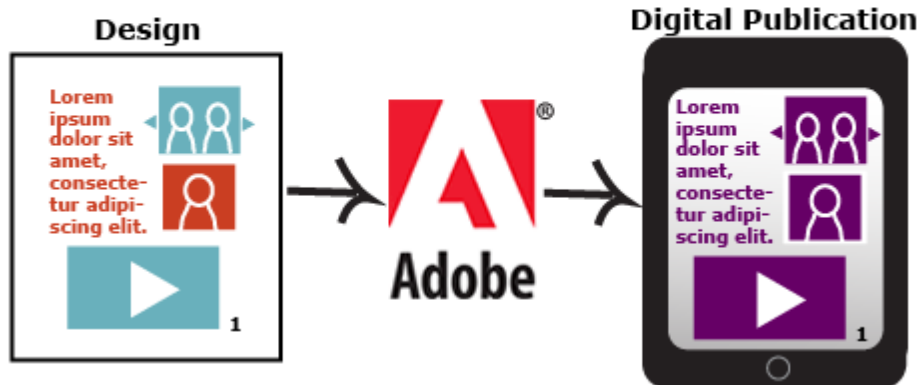
1. Lay out static content in Adobe® InDesign



2. Add interactive content to design with the Adobe® Digital Publishing tools



3. Render design files through the Adobe® Digital Publishing Single Edition to finish digital publication



4. Publish finished digital publication on the Apple® App Store



Adobe® Digital Publishing Options

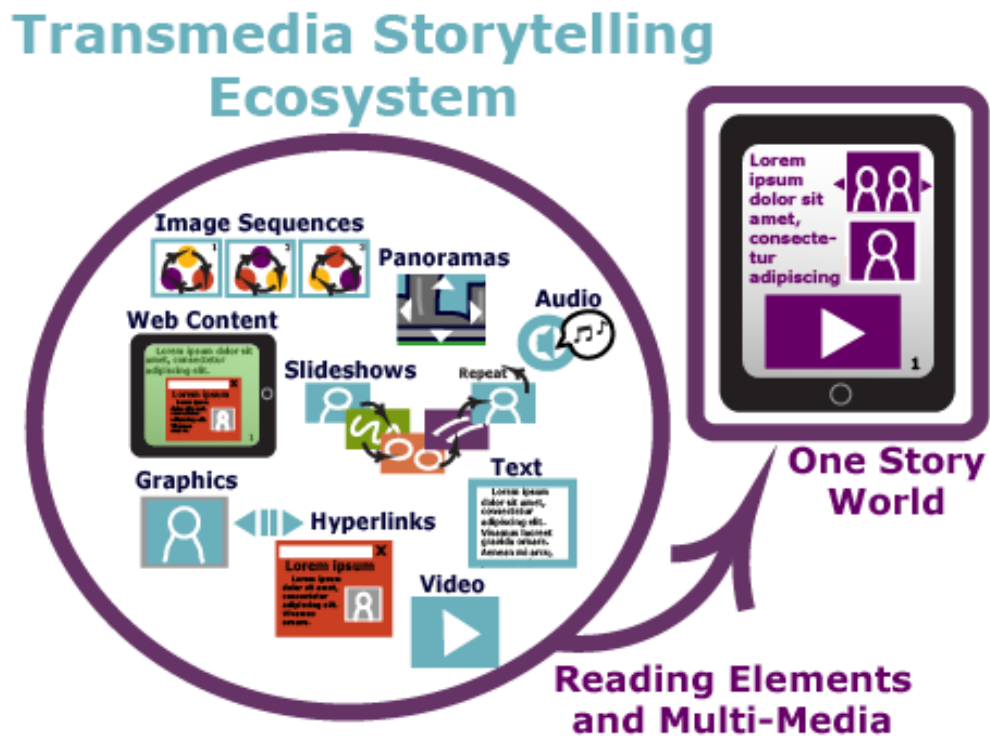
At this time, the Adobe® offers three publishing options which are the Profession, Enterprise, and Single Edition (Adobe® Systems Incorporated, 2011). Every edition of the Adobe® Digital Publishing will render digital publications, but each one serves a different client. The Professional and Enterprise Editions accommodate large companies who can afford to pay per download and want their content available internationally on every digital device (Kuo, 2012, Chapter 1). These two editions place few limitations on their clients, but they are very expensive publishing options. The best option for self-publishing authors is the Single Edition.

The Adobe® Single Edition will render a single digital publication for a one time price of \$395 (Adobe® Systems Incorporated, 2011). Authors must then apply for an Apple® developer license to deliver their content to consumers. Unfortunately, the Single Edition only allows the rendered publications to be available in the Apple® App Store for consumers in the United States (Adobe® Systems Incorporated, 2012). The Professional and Enterprise Edition do not have these restrictions because they can publish content internationally and on both Android® and Apple® markets (Adobe® Systems Incorporated, 2011). Although the Single Edition is restricting, it is very affordable for authors who are new to digital self-publication. Adobe® constantly updates and expands their software features so the limitations of the Single Edition may only be temporary.

Chapter 6: Interactive Overlay Ideas

Interactive Ecosystem

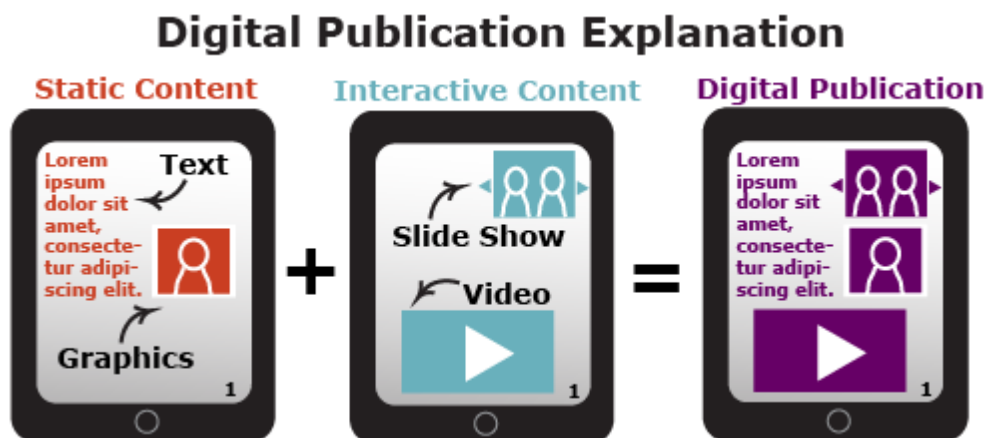
Traditionally, children’s literature relies on text and graphics, but with the Adobe® InDesign software and the Adobe® Digital Publishing Suite tools, traditional reading elements combine with multimedia to create a transmedia storytelling ecosystem. This ecosystem of text, graphics, web content, video, audio, and other interactive elements immerses young readers into an encompassing storyworld. The Adobe® Digital Publishing Suite offers a collection of innovative features that make this new type of digital storytelling possible. Each feature adds interactivity for the Digital Generation, and offers authors endless possibilities for creative storytelling.



Interactive Overlays

A digital publication consists of both static and interactive content. The static content comes from Adobe® InDesign while the interactive content comes from the Adobe® Digital Publishing interactive overlays. Overlays are dynamic features that go over the static elements for either interaction or the addition of another media platform.

Authors can make their digital publications into transmedia ecosystems by using the overlay features in the Adobe® Digital Publishing. The text encourages literacy, while the overlays create the transmedia experience. The overlays connect to different platforms and media to create a storyworld, which engages the readers and encourage interaction.



Hyperlink Overlay

With the hyperlink overlay, text and graphics function as URL, email, and page links to open external websites, prompt email programs to open, and navigate the digital publication (Kuo, 2012, Chapter 4). This overlay easily creates an intricate transmedia storytelling ecosystem where readers have the freedom to make choices and control their experience within the ecosystem.



Examples of URL Links (External Websites):

- Online Games: Since the Digital Generation was born into the culture of gaming, it is essential to include it to grab their attention. Authors can create an online, story-themed game on an external website and then send readers there with the hyperlink overlay (Kuo, 2012, Chapter 4). If they enjoy the game, they have a higher chance of returning to the digital publication and rereading the content.
- Product Site: Readers can buy merchandise like shirts and plush-versions of the characters. With a product site, the digital story translates into physical items and

- brings the characters into real-life. This also creates an added revenue stream for the author.
- Fan Forum: By using the hyperlink overlay to link to a fan forum, readers can talk to other fans to give their opinions about the content and participation in a group conversation about the story.

Examples of Email Link:

- Email: Readers can email the author for direct feedback (Kuo, 2012, Chapter 4). In the days of social networking, children like to feel like they can give their input. This also encourages children to participate in events happening outside of their device. Authors could encourage children to email charity organizations and then volunteer, or to email politicians to voice their concerns. Although simple, email links could encourage real-life participation, and make children feel important.

Examples of Navigation Links:

- Basic Navigation: The hyperlink overlay allows authors to be creative with the way children navigate from page to page in the publication. This is especially useful for young children who are strongly focused on the images. Small details like creative navigation links intrigue young children and add innovation to the storytelling.
- Side Stories: By adding hyperlink overlays, authors can tell numerous stories within one story. An example of this is having the basic navigation go sequentially from page to page, but adding extra links on certain pages that lead to side stories about individual characters. This allows authors to create highly developed characters and

optional subplots within a storyworld which leads to children being immersed in the lives and outcomes of their favorite characters.

- Choices: Although choose-your-own adventure books are often thought of as a novelty, children still respond to the ability to make decisions. This feature allows readers to make decisions within the story by choosing hyperlinks to send them different locations within the digital publication. This makes the experience unique for every reader.

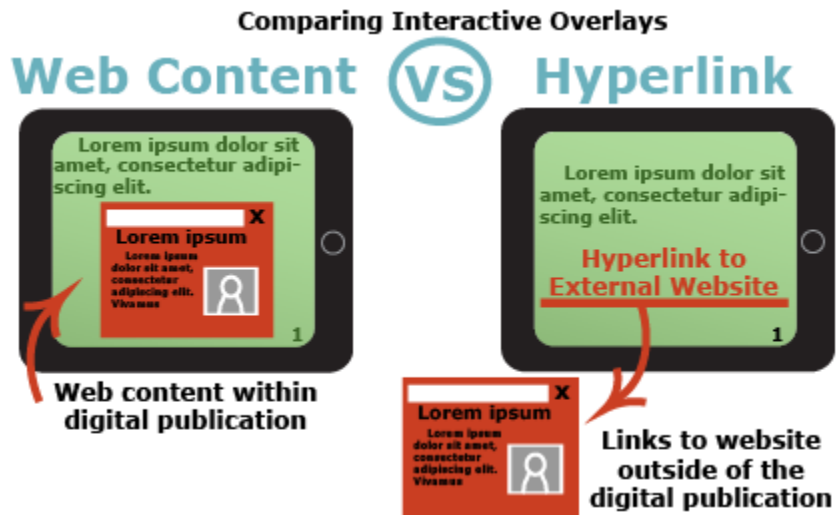


Web Content Overlay

Another feature that adds the benefit of the Internet to a digital publication is the web content overlay (Kuo, 2012, Chapter 10). This overlay feature displays web content inside the publication, instead of sending the users to an external website (Kuo, 2012, Chapter 10). This is useful for the youngest readers who are not quite ready to step out alone into the world of cyber space.

By using this feature, information in a publication can be easily updatable which is useful because it ensures the publication has the most recent information. Because the Digital Generation prefers to the latest information, most informational books that get through the

printing process are already obsolete. This opens up the possibility of creating ongoing history books that continually add content or technique books that add new processes as they are developed.



Video Overlay

With the creation of video enabled devices like mobile phones and digital cameras, video has become more than just a form of entertainment. Video streaming web sites such as Vimeo® or Youtube® have become the way many young people receive the news. This, in conjunction with TV and movies, has programmed children to be extremely comfortable with receiving information through video.

Using video also allows for the author to place the reader directly into the storyworld. The children will know the appearance and sounds of the characters' world in an instant. When using this overlay feature in a digital publication, the text explains the significance, and the video lets the readers experience the moment.

Audio Overlay

With the audio overlay, sound enhances the audience's reading skills and connection to the storyworld. This feature can be used to record an actual narration of the story to help readers with pronunciation and reading comprehension (Kuo, 2012, Chapter 7). Each page would have an audio icon, and children have the choice of reading the text on their own, or having it read aloud to them. The tradition of story time fades as "parents today spend 40 percent less time with their children than parents did just 30 years ago" according to *Understanding the Digital Generation: Teaching and Learning in the New Digital Landscape* (Crockett, Jukes, & McCain, 2010, Chapter 10, Section 5, para. 5). The audio overlay may be a solution for preserving the oral tradition of storytelling in the Digital Age.

The audio overlay can also automatically play when each page is turned which opens up new possibilities. With the automatic play option, each page could have its own simple song that excites the reader about the next event in the story or expresses the mood of the setting with audio clues (Kuo, 2012, Chapter 7). Using audio to expand the storyworld creates new possibilities by adding a soundtrack to the transmedia storytelling ecosystem. Movies and television shows have soundtracks so in the Digital Age there is no reason why children's books cannot have soundtracks.



Slideshow Overlay

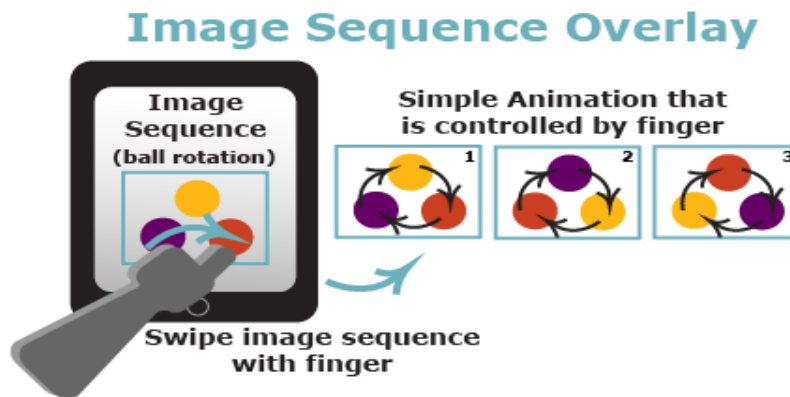
The slideshow overlay allows authors put a collection of images together to show visual examples without a specific narrative (Kuo, 2012, Chapter 5). This encourages the Digital Generation to use their visual thinking skills as the images describe an experience to readers instead of specific details (Kuo, 2012, Chapter 5). This could be useful in illustrating the experience of the different cultures, places, or events.



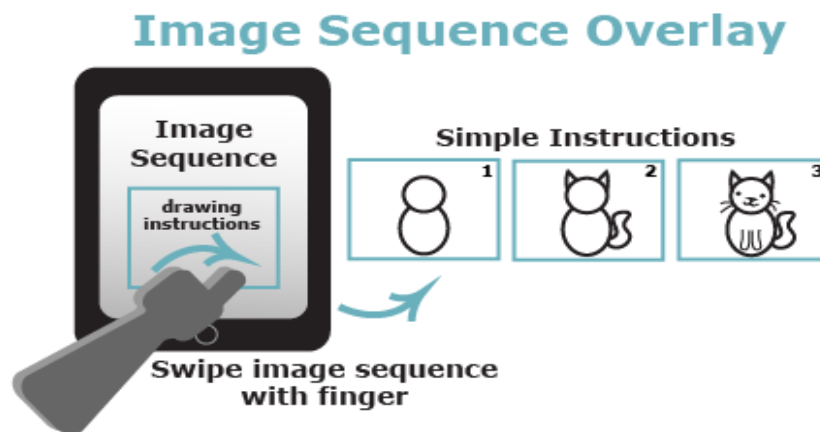
Image Sequence Overlay

The image sequence differs from the slideshow feature by the way that the reader controls the sequence. The slideshow normally begins when the reader presses 'play', but with an image sequence the reader can scrub back and forth on a series of animations without a timer (Kuo, 2012, Chapter 6). Although this feature was meant to show the 360 degree rotation of products, it can also create short animations (Kuo, 2012, Chapter 6). This gives authors the ability to animate simple character actions or show basic instructions.

The image sequence can show characters acting out silly antics in the story by using simple animations. This makes the characters become more realistic and allows authors to give each of their characters motion personality. Small, quirky details like these really help connect the reader to the character and make a more entertaining experience.



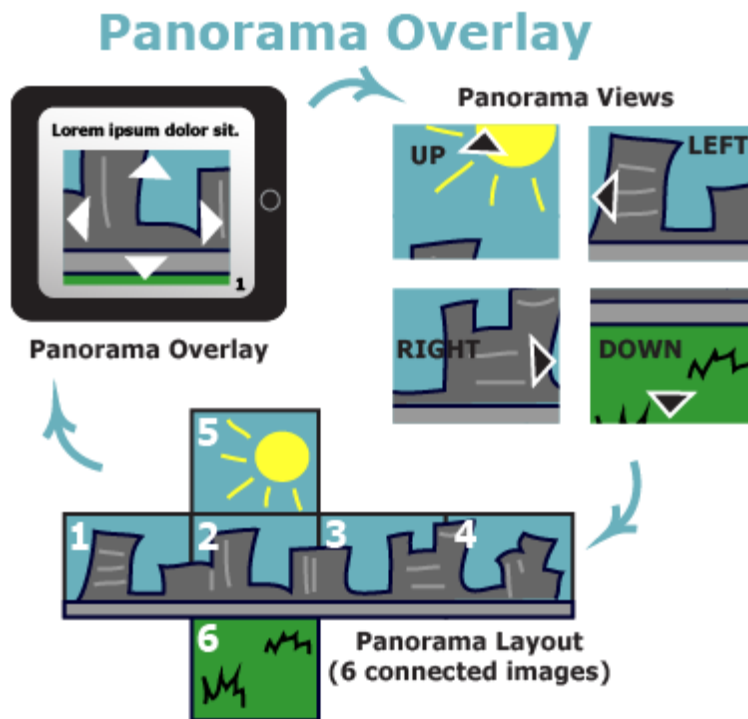
For older children this feature could be very useful in explaining simple instructions. An example for this could be simple dance steps, tying knots, or exercise motions. This feature allows the reader to scrub the animation so the reader can play it back-and-forth and at their own pace to closely follow the action being explained. This helps solve the problem of instructional literature because print is often too disjointed and video is too fast. The image sequence feature solves this problem by providing a pacing method for instructions.



Panorama Overlay

The panorama overlay uses six images in a cube in order to create a 3D effect (Kuo, 2012, Chapter 7). It allows the readers to feel as though they are standing in the storyworld, which strongly connects the reader with the setting and makes the storyworld more immersive. For example, authors could make their audience feel as though they are looking around inside a NASA shuttle, or in the rainforest.

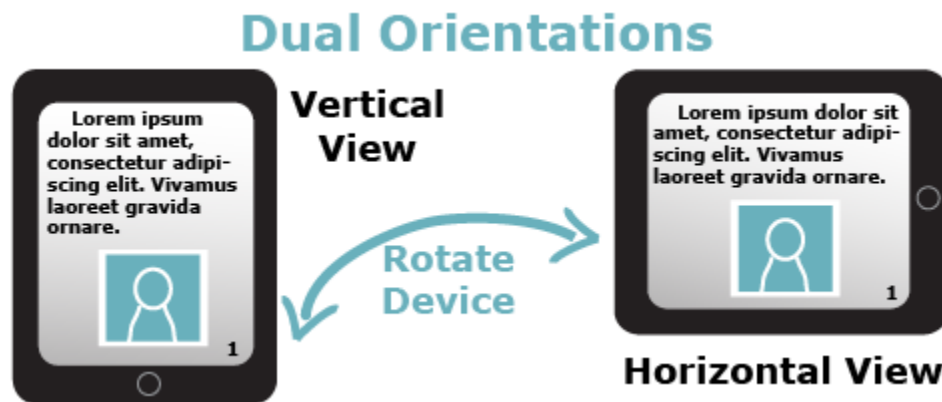
Another use of this feature is to put the reader in the situation of the character to enhance the connection the reader has with the character's emotion. Examples of this could be to create a panorama of a nervous character looking out into the audience at a spelling bee, or a rock star singing on a stage in front of thousands. By placing the readers in the characters' place with the panorama overlay, authors help children connect emotionally with the story.



Chapter 7: Orientation Storytelling Ideas

Dual Orientations

Normally, when digital readers, tablets, and smartphones rotate, the screen display adjusts to match the direction of the device’s orientation (Kuo, 2012, Chapter 1). By designing a digital publication with both a vertical and horizontal view, two different perspectives simultaneously tell one story. Using both orientation views creates the opportunity for highly creative and innovative storytelling.

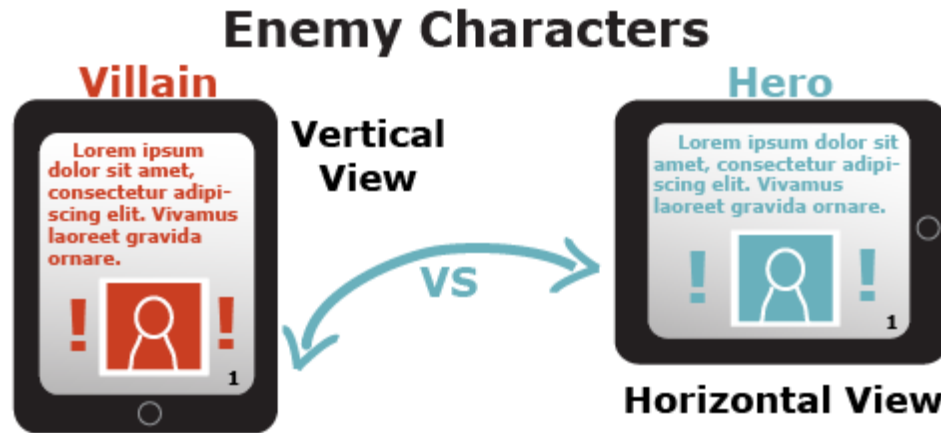


Dual Character Perspectives: Gaming Element

In the Digital Age, modern games such as Nintendo®'s Super Smash Bros. or Blizzard Entertainment®'s World of Warcraft (Blizzard Entertainment, Inc. ®, n.d.) offer players multiple character options. Due to this growing trend, players experience a different perspective each time they play a game, which encourages them to explore storylines and play multiple times. By designating one character's perspective to each orientation of a digital publication, authors translate the game concept of character options to children's literature. Orientation storytelling can allow for very descriptive characters, and intricate plot lines in stories that focus on opposing character views.

Dual Character Perspectives: Enemies

Normally, the classic plot of 'good versus evil' focuses on the thoughts and actions of the story's hero. The storytelling often excludes any character development of the villain, but with the innovation of dual orientations readers can thoroughly explore both sides of a conflict. By designing the publication vertically as the villain's perspective and then horizontally as the hero's perspective, children willingly read the story twice to better understand the enemies' "action and reaction" relationship. This technique is useful for any story with opposing character views such as sport dramas or historical war fiction.



Lessons in Responsibility

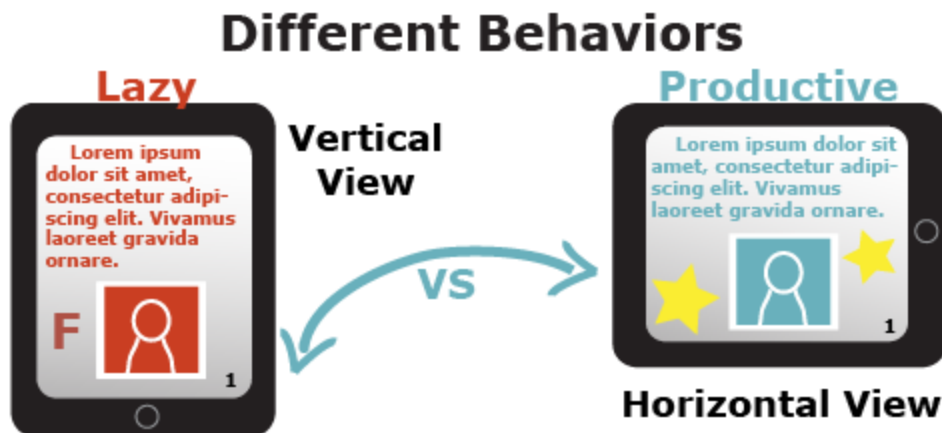
Another difficult concept that children struggle with is responsibility. Adults instruct children to follow rules and complete tasks without explaining a clear purpose for the demands. Children do not understand that finishing homework improves their comprehension of the material or that good hygiene prevents illness. They cannot grasp that responsible actions lead to a healthier and happier lifestyle because it is difficult for them to see the long term consequences of daily actions. By contrasting characters' choices, children see the benefits and consequences of actions, which lead to a better understanding of responsibility. Teaching desirable class room behavior and proper animal care are two examples of lessons that could be taught using orientation storytelling.

Lessons in Responsibility: Desirable Behavior

When children enter the classroom, adults ask them to obey a litany of frustrating rules. At a young age, many do not understand how finishing homework or walking in single-file lines benefits their learning. The lack of understanding often leads to frustrated students who struggle at school and at home. With dual orientations, contrasting examples show children the

consequence and benefits of certain behaviors. The goal is to encourage children to choose the desirable behavior by providing clear examples.

An idea for explaining proper classroom behavior is to contrast the actions of a productive and lazy student. The vertical orientation could demonstrate the actions of a student who does not want to complete assignments and instead disturbs the class. The end consequence of his lazy behavior is frustration at school and tension with his parents. The horizontal orientation could demonstrate productive behavior like a student studying for tests and properly participating in class lectures. The benefit of the student's desirable behavior is academic success and parental praise. By contrasting the two students' actions, children can form a clearer picture of how they need to behave in the classroom.

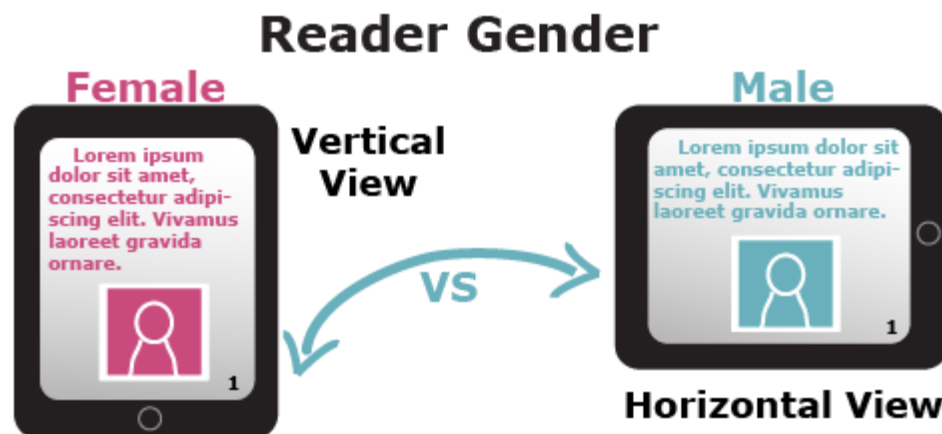


Orientation Storytelling for Reader Connection

When children connect to the characters or events in a storyworld, their interest in the content grows because they relate the fictional world to their daily life. Children's immersion in the fictional world increases when they have the option to customize the reading experience. Using the dual orientations to change details such as the main character's gender or the storyworld environment helps readers form a strong connection to the content.

Reader Connection: Gender

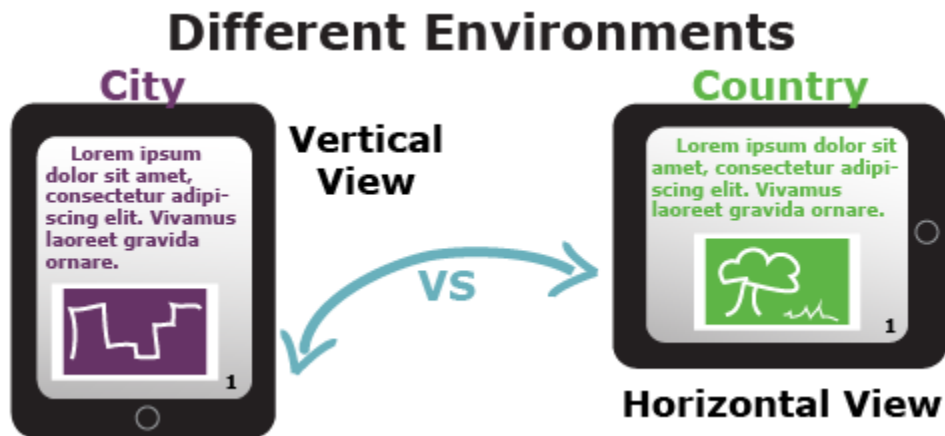
A simple way to encourage reader connection is to make the main character as similar to the reader as possible. By designing one orientation view to be a female character and the other to be male, children can choose the gender of the main character by simply rotating their digital device. Giving children the ability to decide this detail helps young readers understand the perspective of the main character. This is already a common option in many modern games such as Blizzard Entertainment®'s *World of Warcraft* (Blizzard Entertainment®, n.d.).



Reader Connection: Environment

Another small detail that creates a reader connection is giving children the option to pick the environment of the storyworld. This allows children to relate to a fictional world that is highly similar to their own. An example of this is setting one orientation in the city and the other in the country. One version of the story would involve sky scrapers and subways while the other might include farms and forests. This allows for readers to not only connect to where the story is taking place, but also the culture of the environment.

Allowing readers to choose the setting also exposes children to a new environment and perceptible, as well as developing a connection. In addition to relating to readers' culture, the dual orientation allows authors to show children contrasting lifestyles like impoverished areas or foreign countries. This use of orientation storytelling offers both familiarity and cultural growth.



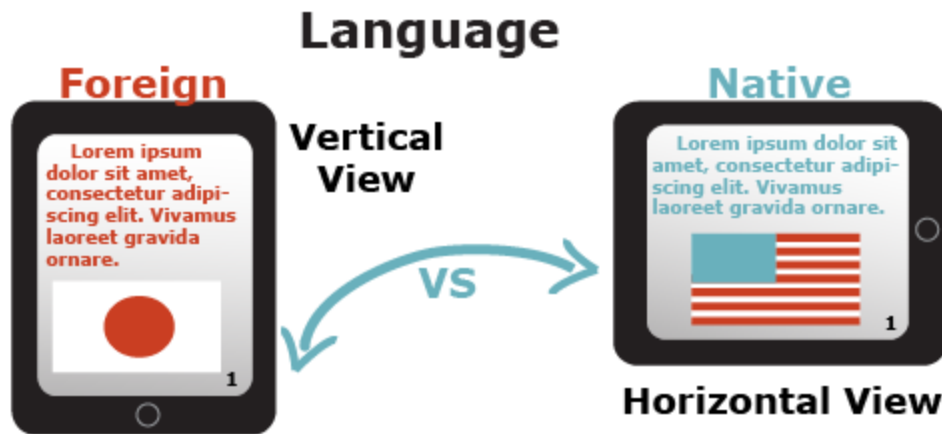
Orientation Storytelling for Lessons in Communication

Teaching children how to communicate is an arduous process that requires plenty of practice and proper modeling by adults. In the Digital Age, oral communication is fading as digital forms such as texting and emailing reign supreme. Children often show more interest in a keyboard than a group discussion. By using orientation storytelling authors can creatively give examples of proper communication etiquette and encourage children to learn a foreign language.

Lessons in Communication: Foreign Languages

A great way to introduce children to a new language is to present the story in their native language and then offer the story in the foreign language in the secondary orientation. Both stories are exactly the same so readers will understand the content, but now they can challenge themselves to read the story in a new language. Children can easily flip their device back and

forth in between the two languages to translate words which is a more immersive technique to introduce children to a new language than traditional methods of memorization or vocabulary work books.



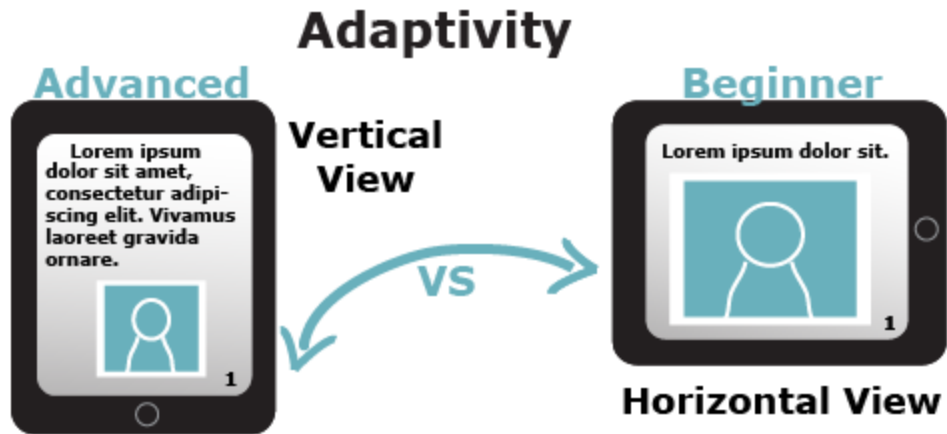
Orientation Storytelling for Adaptivity

The dual orientations also allow authors to utilize the gaming element of adaptivity. Adaptivity refers to the device adapting to the skill level of the user (Prensky, 2006, Chapter 7, Section 8, para. 1). Many video games allow players to choose their level of difficulty such as beginner or expert. If the game is too easy, players lose interest and quit playing. If the game is too difficult, frustration builds and players quit (Prensky, 2006, Chapter 10, Section 5, para. 2). By bringing the adaptivity into reading, the digital publication is appropriate for the readers' abilities, but also allows them to challenge themselves.

Adaptivity with Reading Levels

By utilizing the dual orientations of a digital publication, children's literature will adapt to readers. Authors can use the two orientations to tell the same story for different reading groups. The horizontal orientation is ideal for beginner reading because the format allows for

storytelling with heavy imagery while the vertical orientation is best for advanced readers who can handle paragraphs of text. Both age ranges would be able to enjoy the same storytelling and content while still reading at their appropriate level.



Conclusion

In order for the children of the Digital Generation to develop comprehensive reading skills, they must find a balance between the practice of reading and their habitual use of technology. Although they live in a sophisticated environment with numerous media distractions, they still need to learn crucial literary skills if they want to succeed academically and vocationally. The American education system attempted to focus solely on reading instruction to solve the proficiency problem, but it proved to be unsuccessful because the needs of the young audience were not addressed. For the reading proficiency of the Digital Generation to truly improve more than just reading education must be reformed. Adapting children's literature to the needs of the Digital Generation is a crucial step in accepting and embracing the world of the 21st Century. Once authors fully understand their audience and embrace their needs, the creative possibilities are endless for reviving the Digital Generation's love of reading.

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