PART I

Storytelling, Education, and the New Media

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Confessions of a Digital Storytelling Teacher

Twenty Revelations About Digital Storytelling in Education

Once upon a time, long ago, during the early, dark days of the digital age (circa 1980), when the Internet was a secret information club for government officials, icons were religious symbols, and iPods were something peas came in, the early adopters of digital technology began using the crude tools of their day to create what we now recognize as digital stories.

Decades later, most of us are involved in digital storytelling (DST), often unconsciously, as we use the powerful new tools we take for granted to satisfy our ancient need to give voice to our narrative. Digital stories are simply the latest manifestation of one of humankind's oldest activities: storytelling. As we are continually swept away by the latest wave of leading-edge innovation, it's reassuring to know that some things don't change. From the age of prehistoric cave dwellers to the age of postmodern digital mediasts, our need to tell stories is one of those things.

My Cell Phone Tells Stories

In fact, the only thing I know for certain about the technologies that await us in the future is that we will find ways to tell stories with them. My first cell phone was a good case in point. When it rang, it played original music while displaying a simple video story of a trip my wife and I took in southeast Alaska. The smartphone I have today does a lot more than this. There is no question that this is something very new. In fact, if I had told people 25 years ago that I would have such a thing 25 years hence, most would have told me I was crazy. Three hundred years ago, I would have been burned at the stake for being a witch.

Revelation No. 1

I know only one thing for certain about the technologies that await us in the future: We will find ways to tell stories with them.

But the fact that I have found a way to use my cell phone to tell a story should also seem ancient, predictable, and comforting. We are, above all, storytelling creatures who use stories to do many essential things, like teach practical skills, build communities, entertain ourselves, make peace with the world, and cultivate a sense of personal identity. Technologies will come and go, but stories are forever. And as we shall see, in many senses what makes stories effective has also been very consistent throughout the ages, a fact that can help ground us when engaging in a form of storytelling that involves a lot of potentially distracting technology. Part II of this book addresses how to tell an effective story, a skill that will only become more important as the technology becomes more powerful.

The Early Days of Digital Storytelling

Even though we were telling stories with digital technology in the early days of the information age, it wasn't easy. I think it's fair to say that early microcomputers weren't story friendly. The Apple IIe computers that my students and I were using in the early 1980s booted up in the BASIC programming language. When you turned them on, a cursor sat there blinking at you, waiting for you to write lines of programming code to create a computer application from scratch. There was a good deal that needed to be created because software as we know it today didn't really exist then.

Revelation No. 2

The digital revolution would have been a storytelling revolution if early computers had booted up in a word processor instead of a programming language.

Imagine Computers Without Software

It's hard to imagine, but in the early 1980s, there wasn't really much software! The tool software that we take for granted today, like word processors, spreadsheets, and image-editing programs, not to mention all of the apps and services available via the Internet, were still far into the future. But even though programming was a calling few of us had, that didn't stop me from using computers as storytelling machines. One of the first computer assignments I gave my high school students was to write a computer program that told a story about the values and principles that guided their lives. Despite clunky keyboards, fuzzy screens, and truly inelegant software, the light of their stories shone through. I have been involved with DST since the earliest days of personal computing, and although the tools have changed dramatically over the years, the nature of a good story—as well as the need to tell a good story—has not.

Revelation No. 3

Digital technology is assistive technology for the artistically challenged.

An Age of Assistive Technology Dawns

I like to think of the tools of the digital age as being "assistive technologies for the artistically challenged." They give the rest of us who didn't learn how to use a typewriter or play a piano or wield a paintbrush a chance to tell a story.

In fact, if I had to summarize the digital age in a sentence it would be this: Finally, we all get to tell our own story in our own way. Digital cameras, painting programs, music keyboards, word processors, and Internet apps—as well as all those technologies just around the corner that we can't even imagine right now—give us new ways to personalize the methods of self-expression. We get to explore new communication forms with relative impunity, because we can try out an idea and then, through the miracle of editing, change our minds, something that's hard to do using a typewriter or a paintbrush. And thanks to Web 2.0 (O'Reilly, 2005)—the name often used to describe the Internet as a distributed, collaborative, participatory commons—we have an international stage for the stories we tell.

Revelation No. 4

The digital revolution in a sentence: Finally, we all get to tell our own story in our own way.

Art Finds Its Place as the Fourth *R*

In fact, it's largely because of the Internet and the need for an international Esperanto for our global village that art is becoming

the fourth *R* and "story" is becoming a key format for global communication. Because we now expect students to produce multimedia homework assignments, including web pages, PowerPoint presentations, and digital stories, the language of art and design is taking center stage. Once a hard sell to a practical public, art is becoming as important for workplace success and personal fulfillment as the other three *R*s.

> **Revelation No. 5**
> Art is the fourth *R*.

For more about this, I invite you to go to the Art the 4th R website (www.jasonohler.com/nextr).

Seeing the Digital Revolution Through the Creative Process

Do you know those moments in your life when suddenly everything changes? Like when you realize that your parents were actually your age at one time? Or the pet you love will someday leave you and go to pet heaven? Being a DST teacher has provided a number of such moments that have changed me deeply and irrevocably, as a teacher, friend, researcher, citizen, creative content developer, and digital humanist.

First, a little background.

Fuzzy Screens and Loud Keyboards

In 1981 I encountered my first personal computers as a teacher. They weren't really computers; they were more like small army tanks. Their keyboards sounded like jackhammers, and the monitors were so fuzzy that people with perfect vision thought they needed glasses. But they worked and provided the beginning of an exciting journey in the development of personal expression tools. The distance we have come in just three decades has been miraculous.

While I have welcomed the increased expression that the evolution of graphic, audiovisual, and other tools has brought to DST students, many years ago I realized something very interesting: As the technology became more powerful, many of my students' stories became weaker. Some students seemed to have an intuitive grasp of using new technology powerfully and artfully, while others didn't. In fact, for them the story components of their digital stories were getting worse. I could hear the words of my teacher Marshall McLuhan as he held forth in the classroom echoing in my mind: Technology is an amplifier.

McLuhan Is Ever Present

On the upside, a car amplifies our backs by allowing us to carry more; it amplifies our feet by allowing us to travel faster; it amplifies our night vision by giving us headlights. But on the downside, it amplifies our ability to pollute, generate noise, and ignore our immediate environment because we move way too fast to interact with it. Technology amplifies the upside and the downside of what it is to be human. And what I was watching in my DST class was a good example of the upsides and downsides of technology in action.

Revelation No. 6

What happens when you give a bad guitar player a bigger amplifier?

My immediate concern as a teacher was to help those who were struggling. As I worked with them, a revelation hit me like a ton of bits: If you don't have a good story to tell, the technology just makes it more obvious. Or to put this in language that anyone who grew up during the 1960s (and beyond) can relate to, "What happens when you give a bad guitar player a bigger amplifier?"

Revelation No. 7

It is the special responsibility of teachers to ensure that students use technology to serve the story and not the other way around.

Don't get me wrong—I really enjoyed music in the 1960s. But a lot of it was loud and pretty bad. I know because I contributed to it. I formed my first band in 1965 when I was 12. We were called Jason and the Argonauts. We were loud. And we were beyond bad.

Finding the Story, Despite the Technology

It became my goal many years ago as a DST teacher to make sure that I wasn't enabling the technophile at the expense of the storyteller in my students. That is, I wanted to make sure that my students knew what a good story was before they sat down behind all the wonderfully empowering and distracting technology they had at their disposal. I began by incorporating storytelling basics into every class in which telling a story was a focus. I even brought in an oral storyteller to help my students learn how to tell stories in front of people in traditional oral fashion. I then helped my students transition from oral to digital stories, applying the tools in service of the story rather than vice versa. And lo, the quality of my students' digital stories rose dramatically. As a result of this discovery, I have included some form of storytelling training in my DST workshops ever since.

The Importance of Learning Communities

Naturally, I wanted to tell others about my dis-covery. One day, as I was trying to explain my experi-ences to a group of educators, I realized I was using stories to do so. When educators pushed back on my ideas, they did so by telling me stories, most of which, from their perspective, were failure stories about try-ing new technology and teaching techniques. No one was quoting research; instead, everyone was telling stories.

Revelation No. 8

Learning communities are storytelling communities.

That's when another revelation hit me: learning communities are primarily storytelling communities. Stories permeate our social fabric and have the primary function of teaching others, whether formally or informally. When you get right down to it, much of the communi-cation that takes place among people, whether in classrooms, offices, living rooms, or the online communities that permeate the Internet, consists of telling stories. I began to see and hear stories all around me, like a kind of social, emotional, psychological, and spiritual air we all breathed to stay alive. It became clear to me that our depen-dence on stories was deep and pervasive and that telling stories with technology merely amplified that fact.

The next revelation came shortly thereafter and had to do with our relationship with information flow in the digital age in two respects: the rate of information change and the inherently conflictual nature of the information we consume in the "infosphere," that great amalgam of information resources (the Internet, TV, radio, and so on) in which we are immersed and which we take for granted—a lot like air. These points deserve some attention.

Lifelong Learning and the Prodigious Rate of Information Change

There is a relatively new term in wide use today that is directly related to the accelerated rate of change of life in the digital age: lifelong learning. It implies that we can never stop learning, largely because the rate of change won't let us. But the fact is that lifelong learning has always been a way of life. Even 50 years ago, people were learning all the time. However, the rate of change was much slower, and therefore the need to learn new things was far less demanding. When little changes, there is little to learn. The slow rate of change assured the status quo a position of supremacy in the scheme of things.

Revelation No. 9

The attitude is the aptitude.

But not anymore. Because the Internet and tradi-tional media forms like radio, TV, newspapers, and

magazines continue to crank like there's no tomorrow, lifelong learning has become a pervasive, immediate, and ongoing lifestyle. The result is that the attitude has become the aptitude. That is, your attitude toward learning new things—as well as your willingness to let go of obsolete information—plays an important role in determining your aptitude and intelligence. Digital storytelling represented one of those areas that tested educators' attitudes about the nature of learning not only in terms of tools but also in terms of the kinds of literacy and classroom communities they wanted to support. For the unadventurous, DST was at best a confusing waste of time, at worst, a serious threat to the status quo. It's all a matter of attitude.

Information Conflict Leads to Story Diversity

Information 50 years ago not only changed more slowly but was also much less conflictual in nature. The information we consumed from the very few sources we had access to fit much better into a consistent schema of how life worked. Want to know how to behave? Pick up a newspaper, watch *Leave It to Beaver* on one of the three channels of network television available to you, or talk to your parents. There was, compared to today, relative consistency among the social behavioral norms portrayed by the few information sources available to us. It was as though a singular world outlook had been coordinated by the few who controlled the distribution of information. If I were paranoid by nature, I would suspect conspiracy.

But that singular outlook has evaporated. The information we have access to is much more liberated and conflictual. Pick a topic, any topic, and head out into the infosphere, where you will find as many different ways to look at it as there are people who care to voice their opinion about it through blogging sites, chat rooms, video cams, and the zillion other ways we exchange information. What happened to the consistent social schema our parents depended on? Gone, given way to our right to be informed, overwhelmed, and free to choose our own paths. In an age of conflictual information, being able to critically assess information, rather than trust it without question, has become a survival skill. The social expectation of children being seen but not heard has given way to the expectation that they become critical thinkers and creative problem solvers largely because the conflictual nature of information demands it.

People in Conflict Need to Tell Their Stories

An automatic result of living with information conflict in the digital age is our need to tell stories. As we shall see later in this

book, the heartbeat of most good stories is conflict resolution. As each of us struggles to make sense out of the cacophony of information that bombards us, the need to construct personal, clarifying narrative that is connected to the world we live in becomes critical. In story parlance, each one of us needs to become the hero of our own life story in which cutting through the clutter of the infosphere becomes our quest as we resolve the issues that face us. In the process we can expect to spend lots of time and energy slaying the multiheaded dragons of fear, ignorance, disempowerment, and distraction.

It became clear to me that "the story" had become the metaphor for our time—not just for education, business, and entertainment, but also for our personal lives as we adapt to life in the digital age. The same story structure that frames much of our popular media can be used to understand and resolve conflict, mine opportunities, and address the challenges we face.

> **Revelation No. 10**
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> Stories help us make sense out of the chaos of life.

> **Revelation No. 11**
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> Story provides a powerful metaphor, framework, and set of practical processes for resolving issues, educating ourselves, and pursuing our goals.

Stories Help Us Survive

In other words, stories are more than just good for us—they are essential to survival. I have come to believe, on a very basic level that feels biological to me, that we need stories. Without them, life is just too overwhelming to piece together from scratch each day. Stories allow us to take snippets of life and put them together in ways that make it possible for us to learn and remember new things. They give communities coherence and our lives meaning. They make order out of what would otherwise be the ongoing chaos of life and help each of us create a sense of personal identity in relation to our communities and the world in which we live. In short, storytelling is far more than entertainment. It's a set of practical processes that can be adapted to a wide range of issues, both personal and professional.

> **Revelation No. 12**
>
> Students need to become heroes of their own learning stories as well as of the stories they tell with their own lives.

For educators, understanding story as a structure and process with practical benefits has profound implications. The story form becomes a way to shape curricula, build units of instruction, and frame academic arguments. Above all, stories become the cornerstone

of constructivist learning, in which students become heroes of their own learning adventures. This happens academically when students build stories around academic pursuits. But it also happens person-ally. One of the most powerful stories a teacher can have students tell is the story of their future selves, in which they become heroes of the lives they want to live. If they are not heroes of their lives, then they become victims of them. Helping students understand this will pay dividends for a lifetime.

Revelation No. 13

Stories help us remember.

Stories Organize Information

It was the practical value of storytelling that ultimately led me to see its utility as a learning tool. Story's structure and rhythm, as well as the emotional involvement it encourages, can help us remember important information that might be forgotten if it's delivered to us in the form of reports, lectures, or isolated bits of information. It is precisely this quality of story, covered in detail in Part II, that makes it so useful as an information organizer. While this quality has always been a hallmark of stories, it's particularly poignant now because we desperately need tools to navigate and coordinate the immense amount of information available to us.

Revelation No. 14

Combining storytelling and critical thinking defines an important pedagogical frontier.

Stories Can Be Dangerous

But stories come with a price. Because engaging with them demands that we willingly suspend our disbelief (Coleridge, 1817), we let our guard down and tend to consume the story experience with little critical assessment. In fact, a successful story is one that essentially hypnotizes us. When we look up from the movie we have been watching or the book we have been reading and realize that two hours have passed, we rightfully consider this the hallmark of a suc-cessful story. For entertainment, this is fine. But for education, we need more than hypnosis. We need intellectual engagement.

To illuminate this potential danger of story, Apple Fellow Alan Kay (1996) compares going to the theater with attending a political rally. The two experiences look similar—they both involve orators, happen on a stage, and employ theatrical production values. But whereas we need to suspend our disbelief at the theater, we want to do the opposite at the rally. We want our critical judgment in high gear at the rally, asking all sorts of questions about what is really going on.

If we asked the same questions while watching a play, it would ruin the experience.

Clearly we need to blend the power and engagement of storytelling with the skills and perspective that insight and critical assessment offer. In fact, blending these two educational strategies is one of the most exciting pedagogical frontiers that awaits us. We need to engage all of ourselves— left brain and right brain, researcher and narrator, critical thinker and storyteller/story listener. Doing so offers the power to engage and educate students in ways that resonate with the media culture in which they are immersed, while providing them the tools necessary to navigate within it wisely.

> **Revelation No. 15**
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> Digital stories allow today's students to pursue academic content in their own language.

Digital Storytelling Allows Today's Students to Speak in Their Own Language

In fact, it's in the academic arena that the greatest potential for DST lies, primarily because it provides digital natives (Prensky, 2001) an opportunity to speak their own language. Students inhabit a largely oral and digital world, and then sit in classrooms where listening and the printed word are the primary media in play. Digital storytelling allows them to express content-area understanding in ways that are familiar. I have seen digital stories that do everything from explain math, science, and literature concepts to illuminate the interior landscapes of cultural, artistic, and personal perspective. Students today are not the passive media consumers of the past. While they consume their share of TV, they also use the Internet and their digital devices to develop and share original video, photography, music, chatter, and other digital creations. For many, digital is the language they speak, the ubiquitous mediascape is the environment in which they feel comfortable, and the multimedia collage is the new global language. For them, Web 2.0 is a highly creative social space.

> **Revelation No. 16**
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> Digital storytelling helps students develop planning skills that are transferable to many endeavors.

Along with the development of content understanding, digital storytellers develop planning skills that are immensely useful and transferable. Digital stories require students to create storyboards, story maps, scripts, story tables, media lists, and other planning products that have wide application. They require students to engage in what those in the creative content world call "the media

production process," a process (covered in detail in Part III) that can be applied to any endeavor that involves creating, editing, and sharing original work. Media production is not something that works if students shoot from the hip. It requires them to zoom out, slow down, take the long view, and ask themselves, "Where am I going and what steps do I need to take to get there?" Most important, the media production process requires students to synthesize imagination, creativity, research, and critical thinking in order to translate their ideas into some form of media-based expression. The personal growth that occurs during this process is as profound as it is practical.

It's All About Literacy

The next two revelations have to do with literacy. Simply put, I have found no better vehicle for blending traditional and emerging literacy development than DST. With DST, good old-fashioned, clear, expository writing is key. "If it ain't on the page, then it ain't on the stage" is as true of a digital story as it is of a movie or Broadway play. Many teachers have told me that media projects are a great way to sneak writing in under the radar. Students who have no taste for the planning and execution of an essay attack the planning and narration of a digital story with gusto.

Revelation No. 17

Digital stories combine traditional and emerging literacies, engaging otherwise reluctant students in literacy development.

My approach to DST also involves, whenever possible, other literacies such as art and speaking, as well as writing and digital production. The actual digital story is the tip of the iceberg, below which are a number of artifacts that can be used to assess traditional literacy, including planning documents, scripted narratives, treatments, story tables, storyboards, and self-assessments, as well as music, art, recorded oral presentations, and other prized examples of student work. A digital story project can literally be a portfolio unto itself of great depth and breadth.

Revelation No. 18

Digital story creation offers an effective means to teach media literacy.

Understanding Media Persuasion

Digital storytelling is also an effective vehicle for teaching another kind of literacy that is becoming increasingly important as our students spend more and more time in a media-saturated culture: media literacy. While there is a good deal of debate about what media

literacy is, I define it simply as having the skills necessary to recognize, evaluate, and apply the persuasive techniques of media.

Our students live in a world overwhelmed by story-based media that often view them in terms of commercial market share. For that reason, we want students not only to learn with media but also to learn about media. We want students to understand that the difference between a successful story and an effective advertisement is largely one of purpose. This is true whether students are using just print or the full arsenal of digital tools at their disposal. In the words of Steve Goodman (2003), "Media is a filter while pretending to be a clear window" (p. 6). We want students to understand how a filter can be made to seem like a window.

The reality is that until students become persuaders themselves, the persuasion of media often remains hidden to them. Digital story development provides powerful media-literacy learning opportunities when teachers involve students in the analysis of media technique and grammar and can relate it to other media in their lives. Doing so helps students detect how and when they are themselves being persuaded. In much the same way that we want students to be effective writers because it helps them become better communicators and critical thinkers, we want them to be effective media users so that they can tell their story and understand the true nature of the stories that others are telling them.

Producing media has another benefit for students: It can help them mature. When I talk to audiences, I often mention "the media maturity line." It is up to me, and anyone else helping students to create media, to help students cross it. Simply put, on the less mature side of the line, students simply want to say what they say with their media. On the other, more mature side of the line, they care whether an audience understands them. That ability, to see what they produce through the eyes of another, is a giant leap in emotional maturity. And creating media is a great way to help them take that leap.

> **Revelation No. 19**
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> Digital storytelling helps students develop *creatical thinking skills*, merging creativity and critical thinking, to solve important problems in imaginative, thoughtful ways.

Creativity and Creatical Thinking: The Most Practical Skills of All

The next revelation has to do with creativity, that touchstone of the human experience that seems to come in and out of favor in the world of education as often as wide ties do in the world of fashion. On the

one hand, it seems to be out of place in the world of standardized testing, No Child Left Behind and the Common Core State Standards. This induces parents, teachers, and school boards to devalue it. On the other hand, there seems to be a general understanding that students who do not cultivate imagination and creativity have very limited options in our innovation-driven world.

To me, creativity is all about what I call *creatical thinking*—combining creativity processes with reflective thought to produce original work. Sir Ken Robinson explains this well in *Out of Our Minds* (2011): "Creativity is not only about generating ideas; it involves making judgments about them." He goes on to explain that the creative process, often romanticized as an effortless flow of activity pursued by the naturally talented, is in fact a lot of hard work. Most creative people will tell you that you have to be willing to make mistakes, take chances, be wrong—all things a high-stakes testing culture that values the right answer has a difficult time supporting. The reality is that creative pursuits involve three stages: creation, assessing one's process and creation, and then changing directions based on what was gleaned from the assessment. This is what Sir Ken calls "the iterative nature of the creative process." Perhaps if we deromanticized creativity a bit we might have a better chance at selling it to a skeptical public. (p. 151)

While we are considering Sir Ken Robinson's contributions to this topic, it is also important to note that he is very clear on another point: "Creative achievement is related to control of the medium . . . creative development goes hand in hand with increasing technical facility with the instruments or materials that are being used." This is absolutely true with regard to using digital tools of expression. In an era in which Art has become the 4th *R* largely because the mediascape has turned us all into potential artists and designers, we need technical skill to go along with our creatical endeavors. We need our paints, whatever they might be, and the ability to use them in ways that are articulate and original (p. 157).

After 30 years in educational technology, it's my belief that the heart and soul of success in the digital age—both personal and professional—lie in understanding that digital technology provides one of the greatest imagination and creativity amplifiers humankind has ever designed. To use new media technology to do the work of previous generations is to miss the opportunities that it presents in education, the workplace, and our personal lives.

To date, I haven't seen an activity that allows students to blend design, creativity, thoughtful expression, creatical thinking, and technology skills as well as DST does. It compels students to think out

of the box while focusing on goals that have real human value. It brings out the practical artist in students while helping them practice creativity as a skill that is marketable, personally rewarding, and good for the communities in which they live. If you want to encourage your students to think creatively while demonstrating their ability to communicate and solve problems—that is, if you want them to become *creatical thinkers and doers*—engaging them in DST is an extremely effective way to do so.

Teachers Are More Important Than Ever

The last revelation has to do with helping teachers find their bearings in the digital age classroom. As a way to stimulate discussion about new media production among teachers, quite often I will show them a sampling of digital stories created by students and peers. While some teachers are genuinely excited and interested in what they see, there are always those who are moved to call their retirement system to find out the earliest date they can leave the profession. It is my fervent hope that they don't leave. Their students need them now more than ever.

It's not important that teachers be advanced technicians. Their students will cover that for them. Students have the luxury of time and well-developed informal learning communities to help them keep up on the latest and greatest happenings in the technology world. What is important is that teachers be advanced managers of their students' talents, time, and productivity. They need to be the guide on the side rather than the technician magician.

The idea that technology is making teachers obsolete is 180 degrees wrong. More than ever, students need teachers who can help them sort through choices, apply technology wisely, and tell their stories clearly and with humanity. More than ever, students living in the overwhelming and often distracting world of technical possibility need the clear voice of a teacher who can help guide them through the learning process. More than ever, students will need teachers for their wisdom. And what sage advice do I recommend teachers give to their DST students? Focus on story first, technology second, and everything will fall into place.

> **Revelation No. 20**
>
> Technology doesn't make teachers obsolete. Quite the opposite. More than ever, students need the guidance and wisdom that teachers offer to help them use technology with care and to tell their stories with clarity and humanity.