DIGITAL WISDOM:
The Digital Immigrant’s Take on What Digital Natives
Need to Succeed in the 21st Century

Gretchen Huizinga
Curriculum and Instruction
University of Washington

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INTRODUCTION

If you believe some people, our culture is in the middle of a massive technological paradigm shift. The advent of the Internet and the explosion of digital technologies, they say, have changed our society in ways that we are only now beginning to fathom and a flattening of access to information via on-line and digital technologies threatens to render some of our traditional cultural institutions obsolete and send carbon-based practitioners within these institutions along the way of the medieval scribe (Shirky, 2008; Prensky, 2001; Tapscott, 1999).

To examine this cultural shift and its purported threats to some of our society’s major institutions, a number of scholars have engaged in a recent spate of research, much of it centered around the phrase “Digital Native,” a term coined in 2001 by Marc Prensky connoting children born post-1980 that have come of age after the advent of the Internet and the proliferation of digital technologies. One line of inquiry has focused on the purported digital disconnect between so-called tech savvy-kids and their schools. Evidence indicates that there is, indeed, a disconnect (Levin and Arafeh, 2002; Selwyn, 2006; Palfrey and Gasser, 2008; Lankshear and Knobel, 2004) and because of this, some sort of action - or at least attention - on the part of the grown-ups in charge is an appropriate response.

Other researchers, like Bennet, Maton and Kervin (2007), however, say not so fast. They contend that the sky-is-falling rhetoric amounts to “the academic equivalent of ‘moral panic’ that restricts critical and rational debate.” (p. 776) Key claims that a distinct generation (or population) of Digital Natives exists and that educational systems must change to meet their needs are, “…based on fundamental assumptions with weak empirical and theoretical foundations.” (p. 777) Therefore, a more measured approach, one based on solid data from rigorous research, is in order.

Even before encountering mitigating voices in the digital debate, I myself had begun to wonder whether the current rallying cry in education to tech up or become irrelevant was something we should be heeding without a more thoughtful analysis of just what we were buying into. It wasn’t that I doubted some of the arguments for more – or more purposeful – inclusion of digital technology in the formal education environments of our children. Rather, I was dubious about the wisdom of moving forward with major
changes in policy and curriculum amid a dearth of substantive research on the matter. The very fact that millions of dollars have been already spent over many, many years for the purpose of providing technological solutions to education problems should itself give us reason to stop and take stock. Especially in light of the fact that all of those technologies are -- or will be soon -- obsolete and most-if not all - the problems still exist.

Much of what has been written about Digital Natives, and their much-less-digital forebears, has come in the form of books, essays and philosophical ruminations on shifts and trends in the culture at large. In the few pieces of systematic research conducted, investigators have focused primarily on the perceptions and opinions of Digital Natives (Levin and Arafeh 2002, Selwyn 2006, Palfrey and Gasser 2008, boyd 2008, Greenhow and Robelia 2009). Indeed, the more I read, the more I noticed an absence in this literature: the perceptions and opinions of adults. A qualifier here: by adults, I do not mean those who have made names for themselves by conceptualizing a future populated with Digital Natives and their technically enhanced brains. Nor do I mean those adults who occupy the rarified academic and policy-making sphere of our culture. The absence I noted was in the population of “average” adults, the ones some are calling Digital Immigrants. These are the parents, teachers and religious leaders of Digital Natives, who, while they may not be experts in all things technical, do have a modicum of insight and wisdom from their own life experiences. They are the ones teaching, guiding and mentoring the Digital Natives now. They are the ones to whom the responsibility of the cultural transfer falls. And they are the ones nobody is talking to.

PURPOSE

The purpose of this study was to seek a “lay of the land” picture of the influence of digital technologies in the lives of Digital Natives primarily from the perspective of Digital Immigrants. Through the lens of an anthropological viewfinder, my research questions focused on uncovering adult perceptions about the cultural impact of digital technologies from a non-expert point of view. I also sought to juxtapose those perceptions against a “snapshot” of an actual group of Digital Natives in 2010.

While digital technology is ubiquitous in the informal learning environments (i.e., life) of Digital Natives, it is not as prevalent in their schools. In an effort to propel the discussion forward in the context of curriculum and instruction, I sought to add another
layer of description to an emerging body of literature that might help inform our thinking about how we include digital technologies in our formal learning environments, specifically by exploring: 1) what was emerging in the culture of Digital Natives, 2) what was “endangered” in the culture of Digital Immigrants, and, 3) what, of both cultures, belongs in our schools. In short, I was seeking Digital Wisdom.

**A CONCEPTUAL FRAME FOR THE DIGITAL PICTURE**

Though much has been written about the impact of media and technology on human life, I have yet to encounter a cohesive, unified theory that explains it succinctly. There does seem to be some consensus, though, that these “extensions of man” (McLuhan, 1964) are very powerful and influential, and should be embraced with much thought and not a little caution. Media scholar Neil Postman (1998) framed it like this:

> Technological change is not additive; it is ecological… A new medium does not add something; it changes everything… after the printing press was invented, you did not have old Europe plus the printing press. You had a different Europe. After television, America was not America plus television. Television gave a new coloration to every political campaign, to every home, to every school, to every church, to every industry… That is why we must be cautious... The consequences of technological change are always vast, often unpredictable and largely irreversible. *(from conference proceedings)*

In a highly mediated and technologically advanced culture, it is a fair assumption that its children would be affected by this ecological change. While today’s Digital Natives are in many ways the same as kids from previous generations, they are also in many ways, substantively different. Palfrey and Gasser (2008) paint a simple picture of the ways in which the lives of kids in the digital generation are different from the majority of adults in their lives:

> Unlike most Digital Immigrants, Digital Natives live much of their lives online, without distinguishing between the online and the offline… They are joined by a set of common practices, including the amount of time they spend using digital technologies… their tendency to express themselves and relate to one another in ways mediated by digital technologies, and their pattern of using the technologies to access and use information and create new knowledge and art forms. (p.4)

Marc Prensky (2001) describes the difference far more dramatically:
Today’s students have not just changed incrementally from those of the past, nor simply changed their slang, clothes, body adornments, or styles… A really big discontinuity has taken place. One might even call it a “singularity” – an event which changes things so fundamentally that there is absolutely no going back. This so-called “singularity” is the arrival and rapid dissemination of digital technology in the last decades of the 20th century. (p. 1)

Whether we characterize Digital Natives in terms of difference or discontinuity, we are forced to acknowledge a distinction, and this distinction may challenge our preconceptions about how we go about educating them in a highly technical, digitally mediated world. The arguments for and against different forms of digital technology in formal education environments can be quite extreme, as Levin and Arafeh (2002) articulate:

The public policy debate surrounding the use of the Internet for education is full of hyperbolic claims… Some promote the Internet as a silver bullet for education, asserting that its use in schools will transform teaching and learning, raise scores on standardized… tests, and improve teacher quality… Others argue that… the Internet [in] schooling is a symptom of a society that values technology and efficiency over moral values and personal connections… . (p. 22)

It is here, at the intersection of all or nothing, that a grand theory of Digital Wisdom would be very useful. Alas, I cannot produce one, and so it is within the context of grounded theory (Merriam, 2006), with “…a specificity and… usefulness to practice” (p. 30), that I situate my research: my hope is that this study will contribute to an emergent, substantive theory of Digital Wisdom and add to the practical or applied theoretical foundations upon which wise decisions about how to proceed with technology in educational settings can be made.

It is important to note here, that some (Prensky, 2009; Anderson, 2008) have used the term Digital Wisdom to suggest that technology will soon act as such a powerful extension of human thought and reasoning that it will eventually make us wise by supplanting human brainpower and eradicating the need for human theory making and investigation. My own definition of Digital Wisdom is quite different: it is the prospect of achieving a balanced, holistic embrace of all that is best of both our analog (real) culture and our digital (virtual) culture and translating that balance into practice in our major cultural institutions, including education.
METHODS

Tradition

This interview-based study falls into the qualitative tradition of “broadly descriptive” research as opposed to “problem-oriented or theoretically-driven” research, (Wolcott, 2005, p. 181). My goal of seeking wisdom from within the digital conversation led me to develop a semi-structured interview protocol (Merriam, 2009) that was specific enough to direct the conversation and cover my main topics, but loose enough to be adapted to individual participants as well as to the ebb and flow of the interview process.

Coming from a framework of grounded theory (Strauss and Corbin, 1994; Charmaz, 1995), I felt it was important to listen intently to my participants and let the data reveal itself even amidst the forest of my own pre-conceptions. Clearly, I wanted to avoid, “…relying heavily on preexisting beliefs and making bias-ridden judgments” (Miles and Huberman, 1994, p. 262), but nobody ever goes into an interpretive interview with no preexisting beliefs, thoughts or opinions. Therefore, since abandoning all personal biases was not only impossible but also, in the context of a semi-structured interview, not really necessary, I struck a balance by working to develop a sense of when it was time to guide or prompt an interviewee and when it was time to sit back and let the responses go.

I approached the conversations with my Digital Immigrants through a sort of modified “salvage ethnography” lens, modified in the sense that, in lieu of ethnographic fieldwork, I conducted interviews only. My interviews were designed to identify what might be preserved of this “relatively intact, relatively isolated societ[y]” (Wolcott, 2005, p. 181). My hunch was that, though rumors of its demise may be exaggerated, certain aspects of the Digital Immigrant culture were nevertheless threatened in a digitally enhanced, screen-intensive, wiki world. My aim was to identify things being lost -- as well as things that shouldn’t be lost -- in a trade-off for the digital lifestyle.

That said, there are often good reasons why things change. As Thomas Kuhn (1962) suggests, in The Structure of Scientific Revolutions, new approaches to understanding cause revolutions in our thinking. As we have seen, many are suggesting we are in the middle of just such a revolution with regard to the impact of digital
technologies on our major institutions (like education). That is why, I reasoned, it was important to get a good picture of some Digital Natives as well.

Sample and Settings

The participants in this study represented a purposeful sample, my goal being to gather data from a variety of information-rich sources (Patton, 2002). I identified and interviewed three adults -- a parent, an educator and a religious leader -- who were not Digital Natives but who had influential roles in the lives of Digital Natives. Of my three adult participants, each represented a different role in the Digital Native’s world, bringing a wide range of perspectives – or a maximum variation lens (Patton, 2002) – to the study, but none exemplified extreme cases in the digital debate (e.g., technophiles with a case to plead, or Luddites with an axe to grind). Digital Immigrant participants had varying degrees of experience in the digital world, as well as some claim to wisdom within their respective occupations.

My parent participant, Bhadra (all names changed for privacy), a married mother of two, is an Indian immigrant from Africa who moved to the US as a child. A deeply religious Muslim, she believes a good education is of paramount importance for her children. Of my three adult participants, she was the least technically adept. My religious leader participant, Philip, is the senior pastor of a large, suburban Christian church. In his late 30s, he borders on digital nativity, but is old enough to have known a non-digital world in his formative years. That said, he is technically proficient, and an avid user of social media, especially as it regards his duties as a spiritual leader. My teacher participant, Luke, is a high school teacher and junior high vice principal at a well-established private school on the east side of Seattle. Also in his late 30s, Luke is technically proficient but does not identify as a techno-phile. Each participant was interviewed in situ: the parent at home, the pastor at church and the teacher at school.

I also conducted a focus group interview of four Digital Natives. For this group, I looked for typical sample (Patton, 2002) of the Digital Native population: teens. Though identifying “typical” teens was a somewhat arbitrary proposition, I paraphrased Clyde Kluckhorn and Henry Murray’s classic statement: “Every teen is like all other teens, like some other teens and like no other teens,” (Wolcott, 2005, p. 173) and moved forward. None of teens was on either extreme end of the SES spectrum, where either too much or
too little access to a variety of technologies would represent an anomaly rather than the norm, and I worked diligently to get a good cross-section of ethnicity. My sample consisted of four Digital Natives: DeRon, an African American boy, aged 16; Marcus, a mixed race boy, aged 18; Jason, a Caucasian boy, aged 18; and Daljit, an Indo-American girl, aged 17. They represented two high schools from a medium-sized city north of Seattle with a largely working class demographic. I interviewed them in my dining room.

**Data Collection**

The primary data collection instrument in this study was the semi-structured interview, conducted with three individuals and a focus group. All interviews were recorded on video. Though this may be seen by some as a distracting intrusion in the research process, the upside to video recording in this study outweighed the downside. As Powell et al (2003), observe:

> Video… can capture rich behavior and complex interactions… (Clemet, 2000, p. 577). It extends and enhances the possibilities of observational research by capturing… subtle nuances in speech and non-verbal behavior (Martin, 1999, p. 79)… and is better than observer notes since it does not involve automatic editing.” (Martin, 1999, p. 81) (p. 407)

My own rationale for video recording was threefold: 1) there was less room for forgetting or misinterpreting data with video than with field notes, 2) the “thick depiction” of video-based interviews helped me tease out the cultural interpretation of the difference between a wink and a blink (Geertz, 1973) more easily than with field notes, and 3) the additional iterative steps of video transfer, viewing and transcription added multiple recursive layers to the data analysis process. Other possible objections to video interviews were mitigated by the fact that, 1) the subject of digital technology is not particularly sensitive, and 2) in the context of a highly mediated, YouTube-ified culture, the novelty (or discomfort) of participants being videotaped was much less pronounced in 2010 than it would have been even five years ago.

**Data Analysis**

Some have described the process of analyzing hours and hours of interview footage and transcripts as “wallowing in data.” I like this phrase. To make sense of the numerous and varying perceptions of life in a digital world that I gathered over the course
of my study, I wallowed long and deep and in multiple stages.

First, I transferred all video interviews into iMovie and labeled them according to participant category. Then, I literally “went to the movies,” watching the interviews through the lens of a viewer rather than an interviewer. I laughed. I cried. I fell in love. After watching my participants, now mediated in video, I manually transcribed what they said. This process was an incredibly valuable step in the data analysis. By engaging the multiple-demand brain functions of watching, listening and typing, I was able to re-experience the data and, at the same time, solidify it in my mind. I began to feel a sense of intimacy with my Digital Immigrants and Digital Natives. Their views and worldviews were becoming more vivid, the implications of their perceptions were starting to take shape in my mind and I felt myself moving more confidently into the role of meaning-finder (Miles and Huberman, 1994).

After transcription, I printed out the interviews and read through the entire data corpus as if I were reading a book. This process of experiencing the data through the lens of reader was much like my initial process of experiencing the data as viewer: it allowed me to see it with fresh eyes and also forced me to let the data reveal itself to me verbally. As I read through the data a second time, I began to develop codes, some of which came from my initial research framework and question protocols, but many of which surfaced in the data as I read it. My task was to begin to “relate my data to my ideas about my data” (Coffey and Atkinson, 1996, p. 27). From my list of codes, I noted themes and patterns as they began to emerge and clustered segments of data from across my interviews and focus group into similar “bins” (Miles and Huberman, 1994). At this point, I was concurrently beginning to develop assertions, all the while staying very close to my data using a grounded theory framework (Strauss and Corbin, 1994). Since my interviews came from a variety of participants, I focused on triangulation across data sources as a means of testing and confirming my findings (Miles and Huberman, 1994). Subsequently, I engaged in generating broader concepts, “going beyond the data, asking questions of the data, and generating theories and frameworks.” (Coffey and Atkinson, 1996, p. 30)

**Methodological Concerns and Limitations**

Two major “lack ofs” limit much of the research conducted on the planet: time
and money. My own study suffers no less from the lack of either than any other. Even without these limitations, I harbored some methodological concerns that I would be remiss to dismiss although I have taken steps to mitigate their effects through several stages of this research project.

First, as I have mentioned, my chosen lens through which to view the Digital Immigrant culture is a modified version of “salvage ethnography.” It is modified by the necessity of replacing field observation with an interview-only format. From an anthropological perspective, an ethnographic approach might have revealed richer data through actual cultural observation of both Digital Immigrants and Digital Natives. To address this issue, I designed my interview protocols specifically to probe cultural aspects of the topic of technology and also approached the study from a phenomenological perspective. Since, in this tradition, “the phenomenological interview is the primary method of data collection” and reveals “a study of people’s conscious experience of their life-world” (Merriam, 2006, pp. 24-25), I felt that interviews, if conducted purposefully, could approximate an ethnographic outcome necessary to analyze the data through my chosen lens.

Second, I have outlined my participant selection in terms of maximum variation and typical sampling. In truth, there was a great deal of convenience sampling (Merriam, 2006) as well. In the process of identifying my Digital Immigrants, I naturally contacted people whom I knew, who lived in the area and who would be willing to talk on video. The Digital Natives were students my husband knew. Merriam (2006) cautions that sampling “on this basis alone is not very credible and is likely to produce information-poor rather than information-rich cases.” (p. 79) Fortunately, I was able to identify Digital Immigrant participants who met other sampling requirements (above) and I took care not to stack the deck in any one area. Also, although my husband knew the Digital Native participants, I did not. This removed a layer of familiarity that may have clouded results.

Third, as is often the lament of the qualitative investigator, my sample was small and not necessarily representative. Though Miles and Huberman (1994) warn against the pitfalls of small, non-representative sampling and suggest that it limits the researcher’s ability to generalize, I draw, once again, on Harry Wolcott (2005) to justify the kind of
generalizing I purport to engage in, treating generalization as “something highly desirable but always just beyond grasp” (p. 172): though I cannot hope to make broad generalizations to other populations from my small, non-random sample, that is not really the goal of this kind of research. What I can hope for is to uncover some common likenesses that might be considered representative in the context of a cultural snapshot. I can also hope to uncover some “complex specificness” (from Geertz, in Wolcott, 2005, p. 174) that would mitigate the sample selection and size.

PICTURES OF THE DIGITAL NATIVE

Snapshot #1: Ode to the Cell Phone

In human terms, Digital Natives are much the same as teens that have gone before. They are still wrapped in the hormonally charged, impulsive, angst-ridden bodies that have served as flesh-huts to every adolescent who ever walked on the planet. They still think school is boring and their parents don’t know very much. Identity formation is a full-time job, so they try on friends and trends like they try on jeans, aiming for the perfect fit. Generational claim-staking -- we are NOT our parents -- oozes from their conversation and they still make confident assertions about the world and their place in it regardless of their mere dozen-or-so sentient years of experience therein. Though the institutions that have the responsibility to shape them (the family, the school, the church) are more influential than most Digital Natives give them credit for, they still compete for primacy of influence with the friends, music and media of Digital Natives.

One thing that sets this generation of teens apart from all the others, however, is its immersion, from birth, in a society filled with digital technologies. These teens have unprecedented access to a plethora of information and influences that previous generations could not even begin to imagine. This, alone, was worth probing.

In this study, I asked four Digital Natives to tell me about their lives with digital technology, including the kinds of tools they had, and how, where and why they used them. To reiterate, the purpose of this focus group was more to get a snapshot of Digital Natives in 2010 rather than a policy primer on their vision of technology in the classroom. As the data will suggest, this group of Digital Natives embraces technology primarily for social purposes. As with other curricular considerations, the classroom
ramifications of technology remain within the purview of Digital Immigrants. For better or worse.

My questions covered the full spectrum of media and technology and my participants dutifully answered them, including the questions that clearly made them tired (it was, after all, 10 a.m. on a Saturday morning). There was one topic, however, that emerged like a bull coming out of chute number 4, and aroused them physically, intellectually and emotionally: the mobile phone. Though the Digital Natives in this study are surrounded by myriad electronic and digital media tools, the single most important digital tool in their possession - and in their lives - is the mobile phone.

Now, to anyone who has lived on planet Earth lately, this is the kind of statement about which you might ask, “You needed research to tell you that?” Indeed, even the most unsophisticated observation will reveal an entire culture that is nearly surgically attached to its mobile devices. Still, as the conversation with my Digital Natives progressed, the intensity of their responses increased or decreased in direct correlation to my proximity to the exposed cell phone nerve. This particular corner of the snapshot did much to confirm a particular hunch I have, namely this: the mobile phone is one digital technology to which influential adults must pay scrupulous attention. It is unlike other digital tools in its power and portability; it opens up tremendous potential for good and evil in the hands of an adolescent; and, as we will see in the following pages, its attraction is to teens as the Ring of Power was to Gollum.

When I asked about the technologies they had at home, all four participants listed, rather listlessly, a full gamut of technologies. “I got my own laptop. I got a desktop. I got a iPhone. I got a iPod. I got Xbox 360, PS3, TV…” droned Marco. Jason and Daljit recited their technical universes in much the same tone, “Laptop, phone, TV, Xbox, iPod, computers, Wii…” More telling was DeRon. In listing his many technologies, he mentioned two [Xbox] 360s, a Wii, a computer, and a TV but, interestingly, didn’t even mention a phone. When I asked about it, he looked at me as if I asked whether he had arms, shook his head, rolled his eyes and said, “Of COURSE I have a phone… of COURSE.”

In fact, it turns out that DeRon doesn’t just have one phone, he has six: the one he uses everyday and, he claims, five backup phones, “just in case.” The whole concept of
backup phones, something I had never considered, resonated strongly with these Digital Natives. Daljit also said she had a backup phone since her main phone “freaked out on her once.” And while neither Marco nor Jason said they had backups, neither will take their phones “over water” for fear of dropping them. Jason related that he actually had dropped his phone in a river recently and was “devastated.”

Just how important is the cell phone to these teens? Marco painted the clearest picture, as nods from his focus group mates confirmed, “My phone’s pretty much my life. If you get a hold of my phone, you could find out everything about me. It’s the biggest thing.” When I asked the group if they thought they could live without their cell phones, their answers were, in order, “No,” “Probably not, no,” “It would be horrible,” and a slow, somber, silent headshake “No.”

This line of questioning was revealing so I pressed in and asked my Digital Natives to describe their relationship with their cell phones. Their responses became very, very personal. In rapid succession, playing off each other, they referred to their mobile phones as, “My best friend… My brother… My partner in crime… My baby… My Precious.” The strong metaphoric nature of their answers indicates the way in which they conceptualize their mobile devices. Lakoff and Johnson (2002) give us a context for this, saying, “Our conceptual system… plays a central role in defining our everyday realities. If… our conceptual system is largely metaphorical, then the way we think, what we experience and what we do every day is very much a matter of metaphor.” (p. 95) In that light, if participants call their cell phones their best friend, their brother or their baby, we don’t have to make too great a conceptual leap to say that the importance of this particular digital technology borders on the importance of family.

Now, at the risk of extrapolating too much here, I must confess that these answers were somewhat disturbing to me. Though I laughed as my Digital Natives talked about their attachment to their phones, their obsessions with the “back-up” and the idea of being “devastated” at the loss of a phone, it struck me that their language and behavior was very much like that of a drug addict who, constantly mindful of the next high, always keeps a “stash,” just in case. We will see this theme of digital addiction surface in later interviews with Digital Immigrants, and this finding alone seems to present an important line of inquiry for future research. In the meantime, we continue with a day in the life of a
Digital Native.

A typical day for the Digital Native begins, ends and revolves around the cell phone. Marco narrates, as DeRon nods constantly in affirmation,

The first thing I do when I get up is check my phone and see if I have any text messages or missed calls from the night…. then, like I’ll go to school and I’ll check my phone throughout the school day, you know, like, I’ll stay constantly on my phone at school. I listen to my music, I’ll get home, I’ll turn my TV on, go right to ESPN… [but] I just continue to stay on my phone. Daily.

DeRon stops nodding and, more succinctly, describes his own typical day: “Wake up, check my phone. Go to school. iPod in all the time. Always texting. You see me on my phone 24/7.” Daljit nods and adds, “I have my phone on my all day. I use it all day.”

Two things struck me from this interchange. One is the issue of rules about digital technology in school and during class time. Though the Digital Natives said their schools had “no cell phone” rules, that didn’t seem to stop them from using them. This suggests that the issue with cell phones is less about rules, and more about enforcement. The other striking revelation of this exchange was that all my Digital Native said the first thing they do in the morning is check their phones. Though I did not probe to find out if they ever got any messages between midnight and 6 a.m., I suspect I join other Digital Immigrants in the unspoken question, “Aren’t you all asleep during that time?”

Snapshot #2: Books R Not Us (and neither is social media)

Despite the fact that the mobile phone quickly became the rock star of the focus group interview and dominated the framework of participant thinking about digital technology, other themes emerged from my conversation with this group of Digital Natives. For one, they all believe they know more about technology than their parents. Marco was the most extreme (and possibly the scariest) of the four, claiming, “I’m like the technology smart one at my house… I hooked up all the computers and all the laptops… so if [my parents try to limit my tech access], I’ll just disconnect it from them… If I get no Internet? You get no Internet!”

Some responses to my interview questions didn’t surprise me, the most obvious being a general disdain for reading. “Like BOOKS?” asked Marco. “You could be doing something way better than reading a BOOK. (laughs) Like playing video games or
talking on your cell phone or something like… Who wants to read a BOOK?” “I do NOT like to read at ALL,” said DeRon and Jason added, “I read just the textbooks I have to for class. Just text books. That’s it. When I have to. Keep it to a minimum.” Daljit admitted that she did, in fact, read for pleasure, but primarily did it late at night, to help her fall asleep. Two questions arise from this exchange, the first being how gender plays into media use, especially as it regards text-based versus visual media. The second question is whether the advent of the e-reader, like Amazon’s Kindle, or more tantalizingly, the iPad, will change the patterns of book consumption among those who claim to hate reading. But those are questions for a future study.

The response thread that surprised me most among this group was a relative lack of interest in social media (like Facebook, MySpace, Twitter), especially in light of research (boyd, 2008, Greenhow and Robelia, 2008) that portrays social media as a central new player in the Digital Native’s life. This may be an example of how a non-representative sample can skew research findings, but all the Digital Natives in my group indicated a relative lack of interest, if not outright disdain for it. MySpace “is kind of played out” they agreed, and Twitter is “a joke.” Though they all copped to having Facebook accounts, they all denied being very interested in managing them. They nodded in agreement to Daljit’s derisive account of the people who, “…have to put updates and… they’ll be like, ‘I’m going to the gym… I’m coming back from the gym.’ It’s like every play-by-play of their life.”

Snapshot #3: I want digital toys. YOU make them for me.

Perhaps the most disturbing theme that emerged from my conversation with this group of Digital Natives -- and it seems to echo national statistics that place American high school students near the back of the pack in the global achievement race -- is their general sense of entitlement to both money and technology in an educational context that assures them of neither. Marco, DeRon and Daljit all agreed that money was a hallmark of success. Even so, all three said they expected to go into civil service jobs (two into law enforcement and one into fire fighting). Jason was the only one who defined success more on the basis of personal satisfaction, and was, ironically, the only one who expressed a desire to be a businessperson. None of the participants expressed any inclination to pursue careers in the classic STEM (science, technology, engineering,
math) subjects that would be more likely to offer them a shot at real money in today’s workplace, or to pave the way for the invention of new products.

And in fact, these teens seem fine with that. They see themselves users of technology, not makers. Marco stated flatly, “I don’t want to be no inventor; I just like using electronics!” When I suggested that tech innovators are the guys who get a lot of money these days and then asked if they saw that as a pathway to wealth like the people in, say, India do, Daljit interjected, “Yeah. They do. They all become doctors or engineers.” I asked, “And what are we doing?” Marco replied, with a huge smile, “Sports!” Daljit shook her head, rolled her eyes and said, “And then we’re complaining about people taking the jobs here…”

An over-arching take-away from my conversation with this group of Digital Natives is that they are, indeed, immersed in a world saturated with digital technology, most notably mobile digital technology. They are comfortable with it, they feel entitled to it and, in many ways, would feel threatened, exposed or at a loss if they didn’t have it. They have never known any other world and there is no indication that they have any sense of loss or nostalgia for a different way of life. For them, “being digital” is normative.

THE DIGITAL IMMIGRANT CULTURE: A SALVAGE ETHNOGRAPHY

Against the backdrop of this picture of Digital Natives, as well as a growing corpus of literature about Digital Natives that sounds suspiciously like Agent Smith from The Matrix (“Do you hear that, Mr. Anderson? That is the sound of inevitability.”), we now turn our gaze to Digital Immigrants, the adults who play the most influential roles in the lives of young people. I asked three Digital Immigrants to give me their perceptions about the kinds of issues teens face in a digitally immersed and highly mediated culture. I also asked them to tell me what they thought about their own place in that culture. Unlike my Digital Natives, my Digital Immigrants, though living in a digital New World, had plenty of experience in the analog Old Country and did have a context for comparison to another way of life. Embracing the New World with varying degrees of enthusiasm, and viewing the Old Country with varying degrees of nostalgia, my participants fairly quickly revealed, in their responses, the idea that technology presents us with trade-offs. They all
expressed, in some way or other, that while something may be gained by the adoption and inclusion of new technologies, that gain is nearly always off-set by the loss of something else.

In this light, my salvage ethnography approach was a great fit. To be honest, I did not seriously view my Digital Immigrants as members of a “simple pastoral tribe,” nor did I, in light of their subsumption into a “more civilized [digital] culture” believe “the allotted time of their destruction is at hand” (Prichard, 1839, in Gruber, 1970, p. 1293). Nevertheless, I sought to assess what aspects of the old culture ought not just to be clear-cut by the digital bulldozer. Specifically, through a New World/Old Country lens, I wanted to know three things:

1) What things are we losing that we might want to keep?
2) What trends are emerging that we might want to lose?
3) How might we accomplish this?

What are we losing that we want to keep?

Face-to-Face Communication

Bhadra, like many other parents, has concerns about how the explosion of digital technology, particularly mobile phones, has impacted the life of her family. She says of her kids, “You know, they have their cell phones and they’re always texting. I feel like it sometimes comes in the way of family life… It’s like they’re texting away and I felt like I lost my communication with my daughter.” This sense of loss of a particular kind of communication became somewhat more personal later in the interview, when I asked Bhadra about her own foray into texting. She explained, “The reason I wanted to learn text messaging is because so many of my friends were texting and they’re saying, why aren’t you texting us back? …but I feel like you lose that… bonding and that voice… I love to hear that other person’s voice… and it seems like nowadays it’s all just so cold. I don’t find it as warm as it used to be.”

Bhadra’s observations are tinged with an element of nostalgia, perhaps warranted, for a more personal kind of communication that appears to her to be disappearing in a digitally mediated world. Whether this is just the latest manifestation of the age-old lament immortalized in the song “Video Killed the Radio Star,” Bhadra’s stated desire to “just be a family without all that technology,” her dismay at how the prevalence of kids
texting *other* kids during visits with *her* kids precludes face-to-face socializing among *any* of the kids, and her feeling that, when her children’s cell phones are on, she is “talking to the wall,” all seem to paint a picture in her mind of a highly connected culture that is missing something essential to true human bonding.

Bhadra’s perception that we may be losing the capacity to be fully present with the people around us due to a preoccupation with people on the other end of a screen is shared by Luke, a high school teacher and junior high vice principal. Luke has been teaching for 17 years and currently teaches a class on relationships to juniors in high school. He also identifies some of the trends he observes among Digital Natives in terms of loss: “What are the requisites of healthy relationships? Well, one is, and this sounds like overstating the obvious, but the ability to interact face-to-face. We’re losing that.”

Throughout the course of our conversation, Luke exhorted both Digital Immigrants connected to Bluetooth devices, as well as Digital Natives plugged into MP3 players or cell phones to, “Be fully present!”

**Authentic Community**

Though Bhadra’s experiences focus primarily around her interaction with her family and friends, other adults, whose purview extends beyond the tightly familial environment, tell similar stories and speak of similar losses. One is the loss of authentic community. Philip is the senior pastor of a large, suburban Christian church and his main concern about the impact of digital technology centers around the loss of authentic community among members of his congregation. He says, “There’s a lot… being written [about] ‘does technology dehumanize us? Are we doing fake community?’ Is our digital community like cotton candy, where it’s sweet and it serves a purpose for a moment but then *real* community becomes like broccoli? It doesn’t always taste really good but has much more nutrients?”

In his own church, Philip wrestles with the trade-offs that appear to be inherent in leveraging digital technology to spread the gospel. He understands keenly that the digital horse is out of the virtual barn, so to speak, as the trend to employ media, particularly through radio and television, began in the last century via radio preachers and televangelists. But he wonders if the natural next step, “e-church,” or a digital body of believers, somehow goes too far:
Can you really do community purely digitally? My gut says no. Because there’s something about human touch, there something about human proximity, whether that’s a construct or whether that’s woven into us, I don’t know. I’m going to say it’s woven into us… [It’s] the whole image of God thing and does community therefore necessitate a personal interaction that involves locale together? Umm, yeah.

Philip recognizes the irony in his wariness of “doing church on a computer” while embracing the practice of video teaching, but realizes that’s because it’s something he’s already used to. Still, he harbors concerns about the long-term effects of media and technology on the church: “I don’t know if we know the spiritual results. We say, ‘Wow!’ of leveraging technology, especially digital technology… [but] will, 50 years down the road, we go, man we messed that one up? That we [were] missing something crucial to the gospel because we used that technology? I don’t think we know.” It is this uncertainty about the downside of digital technology on authentic community, Philip says, that causes him to seek “wisdom on how best to use [technology] from a soul perspective.”

Luke also expresses a loss of authenticity, but from the slightly more disturbing perspective of how his students are actually building alter egos and made up personalities to make friends and influence people. He says, “Technology has become this means of alter ego. Sometimes it literally is a false existence. One case that I know of, a kid created an on-line persona to try and garner friends and networking on line in the hopes that it would lead to actual connections. The problem is, when kids realize, all those things were fake? That makes you weird… You achieved the exact opposite. But there’s a desperation there to be involved and so the answer becomes technological.”

It is this idea of an oddly encroaching preference for technically mediated relationships (screen-to-screen) rather than physically mediated relationships (face-to-face) that seems to give these Digital Immigrants pause when they consider the possibly deleterious impact of digital technology on true community, especially for the Digital Natives for whom they are responsible.

**Time**

Philip and Bhadra articulate another ironic unintended consequence of the proliferation of digital technology: the loss of time. When I asked Bhadra to tell me what she thought kids needed more of today to be successful, she said, rather surprisingly, “I
think they need time. It seems like there’s not enough time and that’s something I feel like I had growing up.” Philip echoes the sentiment with a twist, observing that, “in an information based culture… technology, in trying to make our lives easier, has actually made our lives more hectic.” He says that in the quest for wisdom, we need “time for introspection” and “time for reflection,” but if we’re “always going” and “always receiving information” and if we “never hit the pause button” or “turn off the stupid iPhone” or “get away from the computer” we’ll “never allow that knowledge to be massaged” into our lives.

Like Philip and Bhadra, Luke notes that kids simply don’t have time to do everything they are -- or believe they are -- expected to do in a technically enhanced, wiki world. Relating stories of the 7th grade girl who’s just trying to keep up with school, family and multiple sports practices, or 10th the grade boy who has to miss sports practices in order to begin studying for the SAT two years before he takes it, Luke shakes his head and says, “Kids are busy today. I mean, if you want a really good babysitter for your own kids, you need to ask about four months in advance… They’ve got SO much stuff going on.” And this busy-ness, he contends, is entrenched in a culture that envisions education in a “utilitarian/I’m just trying to get it done” manner rather than in a more “I’m trying to learn something” manner. Technology is fast and facilitates a fast-paced life. “Learning,” Luke says, “is slow… It takes a while for things to really sink in.” And this reality leads to another concern.

**Education as Process**

Luke also believes that the speed and power of digital technology, with its ability to quantify so much so transparently, has facilitated a shift from a vision of education as a process to one of education as a product. Because technology enables us to be so accountable, so immediately, testing data becomes the benchmark by which we judge our children’s progress in school -- and ultimately life. The upside, he notes, is ease of communication. Parents can check the school web site to see where their children are, academically, and follow up when they are falling behind. The downside reveals many more parents demanding that K-12 education be seen primarily as a path to “the killer university, the killer job and the killer paycheck.” Luke elaborates, “What parents tend to be expecting… from school is, ‘you’re going to deliver my kid to the next level, which,
for us, is college.” Luke doesn’t deny that delivering students to the next level is a large part of a school’s mandate, but he notes that, “it’s not just this rigid, linear process.” Rather it is a fluid process that cannot totally be quantified by data. “My frustration,” says Luke, “is we’ve just swung so far to the information/data piece at the expense of seemingly everything else. And so then you get all these kids with all these great skills but to what end? It’s an incomplete picture… There’s a hunger for depth. There’s a hunger for more.”

Philip echoes the encroachment of the data- and information-driven trend even within the church. “I think one of the things [we are looking at] is how we learn… [and] the way truth is apprehended… you go into an average evangelical church and it’s [apparent in] the architecture of our buildings… Let’s build a lot of classrooms. Let’s put a lot of lecterns in those classrooms… and so it is very teaching driven.”

Both Luke and Philip believe there must be a balance in how they approach the education of the students in their care. Both used the words “intentional” and “holistic” many times during the course of their interviews, and both see technology as a subtle threat to our culture’s vision of the purpose of education. Simply by its capacity to reduce information to units of data, and its propensity to make us believe all information should be immediately accessible, technology has shaped a culture that wants “instantaneous access… instant information and explanation” and is more interested in the end product than in the learning process.

“Sacredness”

In addition to teaching, Luke serves in an administrative role as junior high vice principal. In this role he sees a variety of disciplinary situations that now, increasingly, involve social and mobile technologies. He notes a degradation of personal standards when he relates how students who “show a lot of depth” and “a lot of character” in class end up showing a lot of “Jell-O shots” and “stripper poles” on Facebook when they post pictures from Spring Break in Cabo. Digital tools, Luke contends, definitely provide teenagers with unprecedented access to information and virtual communication opportunities. And this can be good. But because the teenage brain is, “impulsive, instinctive and emotional,” this generation of teens also has the unprecedented ability “to broadcast their stupidity to a wide audience, immediately.” Luke says, “Because we have
a mix of impulsivity and access, it’s no wonder these things happen... Nothing is sacred” to these kids. This theme of a loss of “sacredness” and a loss of “the real meaning” and “the real value” of things in an immediate digital culture recurs in Luke’s interview. His suggested remedy of a “re-teaching of the value of language and the value of... what this really communicates” is “big, big, big. Because we’ve lost it.”

**What is emerging that we want to lose?**

**Digital Addiction**

Across the board, in all my interviews with my Digital Immigrants, there was a sense of caution about the purported benefits of digital technology but none came through louder, with more clarity, or with more parallels to the data collected from my Digital Natives, than the emerging sense that our digital technologies are increasingly, and possibly destructively, addictive.

Bhadra, who is the least technically adept of this group of Digital Immigrants, even depicted her own relationship with digital technology as excessive: “Of course I’m too hooked with the cell phone, which I really feel like I need to get rid of because it’s taking up most of my time during the day with calls from family, friends, so forth.” Regardless of whether her take on this is accurate or not, Bhadra perceives that she relies too heavily on her phone. She also perceives that her children struggle with a tendency to spend too much time with their digital tools. Her daughter, she observes, would spend more time socializing on her cell phone than she thinks is healthy and her son would spend way too much of his time listening to his iPod or playing video games if she and her husband didn’t put limits on him. Bhadra’s worry is that digital tools and technologies become so consuming that they get in the way of family life and schoolwork, two things that are very important to her in a traditional culture.

Philip raises an interesting series of questions about the addictive qualities of digital technology: “We talk about addiction to substance, we talk about... sexual addiction... but do we have kids who are addicted to their mobile phones? Is there something neurologically, physiologically that get’s triggered when they get their text? And do we need to start dealing with that from an educational model?” His concern is an interesting foray into the brain research ramifications of digital technologies and the long-
term effects they may have both on our corporate culture and on individual spiritual
growth, especially in light of recently published brain imaging research suggesting that
the use of digital technologies not only changes the way we live and communicate, but
actually has the capacity to alter our brains (Small, 2009, in Carr, 2010).

Philip’s comments about the addictive nature of technology aren’t just directed at
others. He himself confesses an understanding of the powerful draw of digital
technologies, especially in the form of social media. Philip is intentional about his own
attempts to keep the beast at bay but shares that the battle is not easily won, even by a
spiritual leader:

I do these monthly day-aways where… I try to unplug. And it’s been so
hard with having a mobile device with email and Facebook apps and
Twitter… I try to be disciplined about this (long pause) and there’s just
like this compelling, gnawing thing about, gotta check my Facebook, you
know? Gotta post my thing… I’m learning (laughs), that I can’t even have
my web browser open because I can’t multi-task…

Luke is not like that. As he tells it, “The less emails I get? Fantastic! The less calls
I get? Beautiful… When I go home, the first thing I do is turn my phone off… I try to be
hard to find.” That, he says, is a paralyzing thought to his students. He relates,

In class the other day, I said, “What would happen if you guys were to go,
like, a month without going on Facebook?” And you just saw this look
like, how dare you suggest such a thing?… A large part of the addictive
nature of Facebook is a sort of, “I just gotta see what’s going on.”

Luke believes the “ubiquity of access” to digital tools and connections is part of
why students -- and, to be fair, adults -- become so dependent on them. Since we always
have it now, “we get addicted to having it… there’s a real addiction to connectedness that
we as teachers and administrators are dealing with big time.”

So, what are we to make of all this? How does the picture of four Digital Natives
map to what Digital Immigrants are saying about them and the world in which they live?
And what are the extrapolations and implications for education? Certainly, this study
cannot provide us with definitive answers, but it can provide us with some suggestions
for direction. Where, then, does the data from this study -- in light of the literature from
other studies -- point us?
TOWARD A CULTURE OF DIGITAL WISDOM

We live in a technical culture that does, indeed, have the sound of inevitability. Driven by a natural human desire for progress, and accelerated by technological advancement, this culture increasingly moves at warp speed and rarely stops to ask questions about whether its relentless pursuit of progress is particularly progressive. This is why it is good, periodically and rigorously, to stop and ask those questions. If we ask the right questions, and talk to the right people, the answers we uncover can be instructive about how to move forward wisely in a highly mediated, technically immersed culture. In this study, I attempted to ask some of those questions.

Much like other researchers (Levin and Arafeh, 2002; Palfrey and Gasser, 2008), I found a group of Digital Natives living seamlessly with digital extensions of themselves. DeRon, Marco, Jason and Daljit all exuded a sense of comfortable entitlement to their digital technologies, manifested in immediate connections with important people in their lives, immediate access to important information in their worlds, and immediate gratification with entertainment they enjoy. None of these Digital Natives cared more about any of their digital tools than they cared about their mobile phones, probably because the mobile phone is, in actuality, much more than a phone: it encompasses all the roles of other digital technologies and can be carried around in a pocket or purse. The mobile phone was an essential part of my Digital Natives’ lives. It was an essential extension of themselves, their friends and their families. It was nothing less than a love object.

I also found a group of Digital Immigrants, Bhadra, Philip and Luke, who all shared a more tentative relationship with digital technology. They recognize that digital technology can be a good thing, has now become a necessary thing and will be a permanent thing that will not diminish in ubiquity or importance in future years. The Digital Immigrants, however, were significantly more aware of what might be called the downside of digital technology. In the face of an encroaching tendency toward digital addiction, my Digital Immigrants all identified specific digital maladies (a loss of quality face-to-face communication, authentic community, time, a process-oriented vision of education, and a sense of personal and social “sacredness”). All hinted at possible
remedies to those maladies. These remedies included, 1) an increase in parental awareness of, involvement in and engagement with the reality of digital technology in their kids’ lives, and 2) an intentional inclusion, not of more digital technology tools in formal educational environments per se, but of more purposeful discussion of wise engagement with it in schools and other formal educational settings, i.e., curriculum.

Bhadra emphasized parental involvement in the arena of monitoring and limiting the use of media and technology. She outlined some rules and boundaries her own family followed and suggested, anecdotally, that some other parents were obviously not doing the same thing. Luke echoed Bhadra’s sentiments in the context of the school: “Parents have to get involved again. Set some limits,” he reiterated, lamenting how often parents seem to avoid setting limits or boundaries, even around their own use of technology. Ironically, my Digital Natives divulged that their own parents somehow missed the memo on digital limits as well. When Daljit commented that her parents never thought to take away her phone if she got out of line (and commented that some of her friends’ parents did), she admitted, “It would be smart if they did, but they’ve never like done anything like that…” DeRon nodded his head vigorously and said, “It’d be VERY smart. It’d be SO smart!” Whether this is simply oversight on the part of parents, or whether it’s more a reluctance on their part to let go of the perceived digital leash is unclear. It’s a good question for further research.

Outside the home, schools and youth groups have already instituted limits and boundaries on the ifs, whens and wheres of digital technologies. Most schools “ban” the use of mobile phones but, well, drinking alcohol remains illegal for teens in most states, and young people don’t seem to have trouble getting beer either. Herein lies the conundrum: ban or embrace? Should educators continue to view digital technologies, like the cell phone, as distracting or dangerous and continue to ban them? Or should they try to co-opt these technologies as learning devices? If so, what are the compelling educational applications? Again, good questions for further research, but as data from this study highlights, these Digital Natives use their digital technologies primarily for entertainment and social purposes; they don’t necessarily want those devices to become “educational” tools. And because kids generally suspect that adults are always trying to make “fun for you” into “good for you,” they remain territorial about their devices.
My own sense is that educators shouldn’t try too hard to fit the round peg into the square motherboard. Rather than approaching the issue from a “tech up or die” point of view, we might be better off to approach the issue from a “how do we help Digital Natives navigate their digital culture?” point of view. This sense is supported by the fact that none of my Digital Natives -- or any of several other Digital Natives I have asked informally -- said they thought schools needed more technology tools. I find this interesting, having come into the study with the vague idea, promulgated by pro-tech advocates (Prensky, 2001; Tapscott, 1999), that if only schools had more cool technologies, kids would find school more engaging and more relevant. Instead, it appears that my Digital Natives don’t necessarily see this as the main issue. For them, the main issue is freedom: the one complaint they made about digital technology is the fact that schools restrict its use. The fact that their schools (and some of their parents) institute restrictions to protect them from harm and keep them from distraction does not register in the teen brain (see “impulsive, instinctive, emotional”). Therefore, from an influential adult perspective, it may be less an issue of adding more tools and more access, and more an issue of helping students understand the pros and cons of the digital technology they use every day, and, through specific and intentional coursework (discrete or integrated), helping them navigate and use it wisely.

Does this sound suspiciously like what media literacy and digital literacy advocates have been saying for decades? Well, if you know what they’ve been saying, then yes, it does. But in light of our increasing dependence on digital technology, and in light of the findings from recent research revealing a technical culture that has moved a bit too fast for our own good, we may have reached a “tipping point” where the voices crying in the wilderness suddenly become the voices of reason.

Philip invokes business ethics courses as a hypothetical example, “Maybe in our educational model… we need to have some classes on technology and how to use it wisely… In our MBA programs, we had to start having some classes on business ethics and morals because of the lack of ethics that started to become pervasive in the business world… So why, at Your Local High School… shouldn’t they have a class… about how to use technology wisely?” Luke, like Philip, believes that schools might want to be more intentional in their inclusion of coursework about the impact of media and digital
technology in the lives of Digital Natives. “I think… we have given kids WAY more access than they’re capable of handling. And just because they have tech savvy… doesn’t mean they have the ability to know how to use it well… So I think, you know, Facebook etiquette, and cell phone etiquette, absolutely! There just needs to be a lot of on-going conversations about ‘here’s what this really means… here’s what this really looks like.’”

So what does it really look like? And, more importantly, who says so? The answers to those questions go far beyond the purpose and purview of this study, but we might start by looking across the silo. Media scholar Kathleen Tyner (1998) suggests, “As digital technologies coexist in the territory previously claimed by alphabetic literacy, it would be refreshing to see the lessons learned from research about alphabetic literacy applied to new and emerging electronic forms of literacy.” (p. 42)

Further, as the word “holistic” appeared several times in my Digital Immigrant conversations, I will posit that a balanced approach to digital literacy lies at neither extreme of the ideological spectrum, but rather somewhere in the middle, between an emphasis on core subjects, standardized testing and technophilia (where No Child Left Behind and Bloom’s Cognitive Domain reside), and an emphasis on emotional learning, values education and technophobia (where EQ advocates and Bloom’s Affective Domain take up residence).

On the journey toward a culture of Digital Wisdom, it is no longer enough to look at digital technology in schools through an “either/or” lens, but rather to view it as a “both/and” proposition, aiming for an optimal balance of scholarship and soulcraft. Does this bring up crusty old curriculum and instruction debates about the purpose of education and who decides the right balance between cognitive and affective in a globally competitive and increasingly troubled world? Moreover, does it drag out the old straw man of whose values are valued? Absolutely. But in the face of the digital juggernaut that does not stop for discussion, polite or otherwise, we can’t afford to back away from these tough arguments. Nor can we afford to engage in them with only one ear open, so to speak. In this world, it is probably wise to listen to both our intellects and our emotions. Rather than simply “Listen[ing] to the Natives,” as Prensky (2006) instructs, we would be wise to listen to both Digital Natives and Digital Immigrants.
REFERENCES


