Voices from the Field

New Media Literacy Education (NMLE): A Developmental Approach

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All media work us over completely. They are so persuasive in their personal, political, economic, aesthetic, psychological, moral, ethical, and social consequences that they leave no part of us untouched, unaffected, unaltered. The medium is the massage. Any understanding of social and cultural change is impossible without a knowledge of the way media work as environments (McLuhan 1967, 26)

When renowned media theorist Marshall McLuhan wrote the above passage, he scarcely could have imagined the Internet we know today, let alone the plethora of digital devices and assorted networks that have cropped up since the general public was first granted Internet access in 1992. Social networking, blogging, gaming, video and picture-sharing, iPods, iPhones, iPads, YouTube, Twitter, Facebook, LinkedIn and more have become part of the common vernacular of our time. It is hardly believable that less than a decade ago most of these devices and networks did not exist. Yet McLuhan's words are as salient today, if not more so, than they were when published over four decades ago.

While for many of us it feels as though the ground is continually shifting beneath our feet, for "digital natives" (Prensky 2001) this environment represents the world as they know it. A survey published recently by the Kaiser Family Foundation found that 8- to 18-year-olds spend an average of 7 hours and 38 minutes (7:38) using media on a typical day (and this does not include time spent using the computer for homework, texting or talking on the cell phone). Additionally, because today's youth are so good at multi-tasking, they actually fit 10 hours and 45 minutes (10:45) of media content into those 7½ hours. This represents an increase in media usage of more than an hour a day compared to just five years ago (Rideout et al. 2010). In fact, today's young people spend more time online, texting, watching TV and movies, and playing video games than they do in school or with their parents (Common Sense Media 2009).

Even those young people who may not have computers and Internet access in their homes are still participants in a shared culture where social media, and digital media distribution and production have become commonplace (Horst, as cited in Ito et al. 2010). "Media no longer just influence our culture. They are our culture" (Thoman and Jolls 2008, 21).

It is not simply the amount of media exposure that has changed so dramatically in recent years, it is the nature of this exposure. Young people are no longer just consumers of media; they are producers as well. In *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*, Jenkins et al. (2006) describe this new environment as a *participatory culture*. According to this report, a participatory culture has the following characteristics: low barriers for artistic expression and engagement, strong support for creating and sharing, informal mentorship whereby experienced users pass their knowledge on to novices, an atmosphere that encourages a sense that contributions matter, and an opportunity for social connection.

While this new cultural landscape seems ripe with fresh opportunities for learning, schools have largely been either slow to react or have missed the mark completely when it comes to capitalizing on its educational benefits. But this is hardly surprising, few institutions are as slow to respond to change as education; and few changes today are as mercurial as technology. It is no wonder that these two forces have had trouble learning how to co-exist.

A Short History of Media Literacy Education
Take One- A Focus on Technology Literacy

The proliferation the Internet in the mid 1990's kick-started a national debate about how to best use digital technologies for teaching and learning, causing many to rethink education in light of all the new possibilities technology afforded (Ohler 2010). When computers made their way into the classroom, driven primarily by proponents of educational technology (i.e., vendors of product), the focus was primarily on teaching students how to use the tools (Ohler 2010; Jenkins et al. 2006; Cordes and Miller 2004; Oppenheimer 2003). One of the most influential groups spearheading this approach was the International Society for Technology in Education (ISTE). In 1998, ISTE developed the first national standards for students (referred to as the NET's), and subsequently, standards for educators and administrators. Finally, educators could "point to a nationally recognized professional group for support, recognition and the articulation of standards that were specifically developed to address the presence of computers in the classrooms" (Ohler 2010, 19). Although ISTE was not the only organization to develop technology standards for education, they were and still are the most active group in advocating for these standards at state and national levels (Cordes and Miller 2004).

ISTE's efforts thrived in a political atmosphere that also propelled the broader standards movement. Over $55 billion was spent on computer technology and related services during the ten-year span from 1994 to 2004 (Cordes and Miller 2004). The impact of this investment proved to be disappointing, however, as study after study showed little or no improvement in student learning as a result (Oppenheimer 2003). Susan Patrick, director of the United States Department of Education's Office of Educational Technology, affirmed in 2004 that, "despite a decade of investment (in educational technology), most achievement indicators are flat" (Branigan 2004, paragraph 6).

Many reasons were cited for technology's failure to transform education: inadequate teacher training, lack of technical support, too much focus on drill and practice programs, stubborn adherence to traditional instructional methods, lack of time, etc. MIT computer scientist Seymour Papert, who spent five years studying with Swiss childhood development expert Jean Piaget before becoming one of America's leading experts on children's technology, summed it up as follows: "as long as schools confine technology to simply *improv-*ing what they are doing rather than *really changing* the system, nothing very significant will happen" (as cited in Oppenheimer 2003, 25).

But another piece of this complicated puzzle may simply have been that computers were introduced to education ahead of their time, in the era proceeding Web 2.0, or the social net, which transformed computing from a passive viewing experience into an interactive one, thus setting the stage for Jenkins' *participatory culture.*

Take Two- A Shift to Media Literacy

The same technologies that failed to transform schools instead transformed the world outside the hallowed halls of education. As the digital environment changed, so too did everyone's ideas about how to best to teach students about these technologies. It became increasingly apparent that it was unnecessary to teach young people how to use the tools; they were already using them far more proficiently than their "digital immigrant" (Prensky 2001) parents or teachers. As Collins and Halverson (2009) observed, "teens who are creating web pages with animated computer graphics and sound, remixing images to develop music video, participating in web chats and forums, and writing their own blogs are engaged in developing a sophisticated media literacy not taught in schools" (13).

Jenkins et al. (2006) suggest that the media literacy skills required for participation in this new world are all essentially *social* skills, including: *play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking*, and *negotiation.* Because they are social skills, our interactions with one another take on a heightened significance, thus "one important goal of media education should be to encourage young people to become more reflective about the ethical choices they make as participants and communicators and the impact they have on others" (Ibid., 17).

The Skill Du Jour

With this new power of *participation* comes new responsibility. Every time a student creates, shares, interacts, produces, downloads, uploads or remixes, he or she is faced with a choice: *do I credit the photographer for the photo I just added to my paper? Should I post that unflattering picture of a classmate on Facebook?* So while critical thinking is still, well, critical… ethical thinking (which has largely been given a back seat in education) is suddenly becoming the skill du jour.

Ethical thinking is the central theme in a Goodwork Project Report (2008) from the Harvard Graduate School of Education's Project Zero. This report suggests "for the promises of the NDM (new digital media) to be positively realized, supports for ethical participation— indeed for the creation of "ethical minds" (Gardner 2007a, as cited in James 2009, 42)—must emerge" (James 2009, 42). Because young people don't just use media, but help shape it, becoming thoughtful and reflective about their actions is essential. These key skills "are not learned in a vacuum, and certainly cannot be assumed to accompany technical skills. Here the responsibility lies with adults (educators, policymakers, parents, etc.) to provide young people with optimal supports for good play and citizenship" (James et al. 2008).

Prensky (2010) suggests that "installing ethical behavior—figuring out the right thing to do and how to get it done—ought to be our number one concern. We need to best configure students' brains so that they can constantly learn, create, program, adopt, adapt, and relate positively to whatever and whomever they meet, and in whatever way they meet them, which increasingly means through technology" (12).

Likewise, in an article exploring Web 2.0's influence on learning and teaching, Drotner (2007) asserts that media literacy education needs to extend beyond teaching technical skills to encompass the skills and ethical issues surrounding all the digital activities that young people are engaged in, including texting, blogging, editing images and sound, circulating files through mobile phones, and gaming (as cited in Greenhow et al. 2009, 252). Even the ISTE is in agreement on this, as evidenced by their reworked standards which place less emphasis on *technology operations*, and new emphasis on the five collaborative skills they list before it, including *digital citizenship* (ISTE 2007). Finally, in a book about digital citizenship, Ohler (2010) writes that the new digital environment calls on all of us to "develop a personal ethical core that can guide us in areas of experience that are in many ways unfamiliar" (4).

So the question that new media literacy educators should be asking themselves today is this: how do we cultivate ethical thinking skills?

A Cognitive-Developmental Approach to Ethical Thinking

Ethical thinking, characterized as the highest plane of thinking, involves taking the perspective of others, awareness of one's roles and responsibilities in the online communities in which one participates, and reflection about the global harms or benefits of one's actions to communities at large (Davis et al. 2010). While the terms ethics and morality are often used interchangeably, "morality deals with how we act, while ethics deals with how we think about how we act" (Ohler 2010, 157). It's important to remember that developing the cognitive capacity to engage in ethical thinking takes time.

Cognitive and Moral Development

The aim of education is growth or development, both intellectual and moral. Ethical and psychological principles can aid the school in the grates of all construction – the building of a free and powerful character. Only knowledge of the order and connection of the stages in psychological development can institute this. (Dewey 1964, as cited by Kohlberg 1975)

It is impossible to consider cognitive and moral development without mentioning the two most prominent figures to study both, Jean Piaget and Lawrence Kohlberg. While Kohlberg focused primarily on moral development, he based his theories on the cognitive development understandings of Piaget who forged what is still considered the single most comprehensive and compelling theory of intellectual development for children (Crain 2005).

Piaget observed that children think differently from adults, most notably, they start out with a completely egocentric view of the world, unable to understand how someone else's viewpoint might differ from their own. Although children slowly decenter from this mindset as they move through the developmental stages, a sense of egocentrism lingers even into the *formal operational stage*, or the teen years (Blake and Pope 2008).

Like other prominent developmental theorists, such as Jean-Jacques Rousseau and Maria Montessori, Piaget believed that to best foster cognitive development, learning should be a process of active discovery geared towards a child's developmental stage (Crain 2005). He also believed that children progressed through these stages guided by play and direct sensory contact with the environment. In fact, it was by observing children at play that Piaget determined that morality, too, was a developmental process (Murray n.d.).

Kohlberg advanced the work of Piaget by developing a stage theory of moral development based upon his predecessor's cognitive development understandings. He identified three levels of moral development: *Preconventional*, *Conventional* and *Postconventional*. Kohlberg believed that during the *Preconventional Level*, which often lasts until age nine, children's moral judgment is characterized by a concrete, individual perspective. Like Piaget, Kohlberg thought children at this level progress slowly from egocentrism and the inability to consider the perspectives of others to the beginnings of moral reciprocity, although still only able to reason as isolated individuals, not as members of a larger society (Murray n.d.).

Kohlberg postulated that it is not until somewhere between the ages of 10 to 15, when children enter the *Conventional Level*, that they start to believe people should live up to the expectations of their community and behave in 'good' ways. Finally they begin to understand that "good behavior means having good motives and interpersonal feelings such as love, empathy, trust and concern for others" (Crain 2005, 155). At the completion of this level, children develop the cognitive capacity to perceive themselves as citizens of a larger society, an understanding attained as a result of their social interactions with others.

Kohlberg believed the *Postconventional* or final level of moral development, which encompasses the upper domain of abstract thinking, could be entered into as early as age 12. However, some individuals simply never attain this level of moral thinking.

Like Piaget, Kohlberg (1975) thought, "since moral reasoning clearly is reasoning, advanced moral reasoning depends upon advanced logical reasoning; a person's logical stage puts a certain ceiling on the moral stage he can attain" (671). Thus, children whose logical stage is *Concrete* (which can last up and into middle school) are still at the *Preconventional* moral level. So to ask children at this stage to reason through the ethical considerations often required by powerful electronic devices that connect them to the outside world is, according to these developmental theories, simply beyond their cognitive capacities.

A Developmental Trajectory for Digital Media Use

Both Piaget and Kohlberg believed that children spend the first 12 years of life developing the cognitive structures that enable them to grasp the abstract, metaphoric, and symbolic types of information that lead to ethical thinking. This understanding of cognitive and moral development requires us to at least consider how and when the youngest members of our society should be turned loose in a digital environment.

Developmental psychological research largely supports a trajectory for digital media use where "early childhood (up to about eight years old) is a time of high physical activity and low media use with media use at home increasing beginning at ages 9 through 11" (Livingstone 2008, as cited in Bauman and Tatum 2009, paragraph 10). However, traffic on websites for young children (ages 3-12) has increased dramatically in recent years. Data from 2007 shows that monthly visits to one popular site for children (Club Penguin) more than doubled to 4.7 million from the previous year (Buckleitner 2008). Shellenbarger (2006, as cited in Bauman and Tatum 2009) observes that many social networking sites compete for subscribers as young as eight, and since many parents don't even follow this guideline, younger and younger children are going online.

While much attention has been placed on the activities of older children on social networking sites like Facebook, largely absent from public discourse "is any discussion of the increasing availability and presence of websites designed for younger children that have components of social networking (e.g., Club Penguin, Webkinz, Kidzworld)" (Bauman and Tatum 2008, paragraph 7). These sites all include interactive components similar to elements found on adult social networking sites. While there are safety measures in place on most of these sites, Bauman and Tatum (2008) suggest, "younger children may not be developmentally ready to understand the dynamics of these kinds of relationships and communication" (paragraph 5).

Some concerns that experts raise include the inability of young children to distinguish between reality and the virtual world (Baumgarten 2003; Buckleitner 2008; Shellenbarger 2006, as cited in Bauman and Tatum 2008, paragraph 14). For example, attachments to virtual friends or pets that may get disrupted for a variety of reasons (an online friend is no longer on the site, an online pet gets ill) can cause real distress to a child that a parent or teacher may not understand (Ibid.; Fryer 2009). Greenfield (2004) expresses concern with the way advertising is integrated within the content of these sites, as children younger than five are unable to distinguish between commercial and noncommercial content and children younger than seven or eight cannot understand that commercials are shown in order to

sell things. Often, sites designed for young children that include advertising are likely to capitalize on this developmental characteristic.

Greenfield (2004) also raises issues about sexuality and aggression. Noting that while the possibility of sexual predators lurking about these sites receives considerable media attention, what is actually more common are references to such things as 'being a couple'. References like these are developmentally inappropriate for an age group still learning how to develop and maintain real-life friendships. And finally, Greenfield (2004) observes that though these sites technically prohibit swearing and aggression, savvy children find a way around built-in mechanisms. There is a growing concern that the anonymity afforded by these sites encourages some children to say or do things they would not say or do in a face-to-face context.

Despite awareness of these developmental concerns, children are going online at younger and younger ages, with adults largely absent from and unfamiliar with these online worlds. While we can do our collective best to shield young people from a digital world until may be developmentally unprepared for, at some point both parents and educators need to actually enter and understand this digital realm. Otherwise how can we hope to teach our children the skills they need to navigate cyberspace confidently and ethically?

Sowing the Seeds of Ethical Thinking

In addition, or perhaps as a prerequisite to, teaching the literacies identified by Jenkins et al. (2006), it is imperative that we prepare students to be wise users of the tools. What we need, as Ohler (2010) suggests, is a "whole school approach to behavior that sets the entirety of being digitally active within an overall ethical and behavioral context— character education for the Digital Age" (145).

Character Education for the Digital Age

> It seems that we are faced with a remarkable irony: that in an age of increasing artificiality, children first need to sink their hands deeply into what is real; that in an age of light-speed communication, it is crucial that children take the time to develop their own inner voice; that in an age of incredibly powerful machines we must first teach our children how to use the incredible powers that lie deep within themselves. (Monke 2004, paragraph 5)

One Approach

While researching his book about technology's impact on education, Todd Oppenheimer (2003) visited dozens of public, private, urban, and rural schools across the country. In his book and elsewhere, he writes extensively about one pedagogy he believes provides a "smarter path" (363) towards the digital future.. Ironically, the pedagogy he writes about—,Waldorf education— resists introducing any type of technology to students until well into the middle school years, often after 8th grade. Additionally, it is customary for these schools to ask families to limit their children's home access to technology to weekends only, as "the ubiquitous presence of electronic technology is an assault on the senses and diminishes children's natural sense of wonder and curiosity about natural events" (Hether 2001, 143). Oppenheimer writes,

> The notion that imagination is the heart of learning animates the entire arc of Waldorf teaching. When that concept is coupled with the school's other fundamental goal, to give youngsters a sense of ethics, the result is a pedagogy that stands even further apart from today's educational system. (366)

Although Waldorf schools do not utilize overt methods to impose ethical or moral values upon children, strategies that might be more commonly employed in religious schools, Waldorf advocates firmly believe that it lays a solid foundation for both moral reasoning and ethical thinking. Yet scant research exists to support this assertion.

Hether (2001) addressed this paucity of research by conducting her own for her dissertation, *Moral Reasoning of High School Seniors From Diverse Educational Settings* in which she "call(s) attention to the unheralded and relatively unknown Waldorf movement as an educational intervention that appears to have a notable positive affect on advanced moral reasoning" (150). Using a quantitative survey of the development of moral reasoning, called the Defining Issues Test (DIT), Hether measures and compares scores of high school seniors from different educational settings. She uses the DIT because it is recognized as a valid and reliable measure of moral reasoning development derived from Kohlberg's cognitive developmental theory and it provides the largest and most diverse body of information on moral judgment that exists today (91).

Hether's (2001) study shows that Waldorf educated students scored significantly higher in moral reasoning than students from a religiously affiliated high school and students in public high schools. Waldorf educated students scored in a range more commonly associated with college graduates. While this data is significant, what is particularly interesting about Hether's (2001) research is its second phase, which identifies five aspects of Waldorf education that might contribute to higher moral reasoning: *an emphasis on educating the whole person; sensitivity to developmental appropriateness; the practice of storytelling; the integral place of the arts in the curriculum; and the preservation of a sense of wonder towards the natural world*. Here is a brief review of each these aspects:

Educating the Whole Person. In *Frames of Mind* (1993), Howard Gardner identifies eight distinct forms of intelligence: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalist. He asserts, "only if we expand and reformulate our view of what counts as intellect will we be able to devise more appropriate ways of assessing it and educating it" (4).

While traditional public schools teach primarily to the linguistic and logical-mathematical modalities, Waldorf education strives to engage all of them. A Waldorf lesson in math, for example, might be taught to the children visually, orally, through song, movement or by working together towards a common goal, such as building a small structure that requires the measuring of surfaces, etc. In fact, in a Waldorf setting children spend a good part of their day making things with their hands, often working together, not only because it engages several of the senses, but also because making something of use contributes to the development of a strong will. Moral development in the Waldorf doctrine is often described as the transformation of will forces into willpower (Hether 2001). Kohlberg (1975) also noted that the "will… is an important factor in moral behavior" (672), particularly when informed by mature moral judgment.

Educating the whole child, especially in the early years, is supported by developmental research that endorses providing children with "a broad base—emotionally, intellectually, and in the five senses" (Oppenheimer 2003, 198). Additionally, a multisensory approach to learning both deeply imprints lessons in children and accommodates different learning styles (Ibid.).

A Commitment to What is Developmentally Appropriate. The benefit of matching curricular content to the child's developmental stage, a hallmark of Waldorf education since the opening of the first school in 1919, has been supported by the work of Gesell, Piaget, Gardner and others (Dancy 2004). In many respects the Waldorf approach aligns best with Piaget's stages of cognitive development. For example, when children are in the pre-operational stage (which can last up until age seven), heavy emphasis is placed on hands-on activities and make-believe play. It is through such play that young children develop their imaginations and symbolic thinking, an important element of cognitive development that otherwise falls by the wayside (Crain 2004).

While time for play has been largely squeezed out of traditional public schools, its importance is being recognized outside of education. In fact, play is one of the six essential aptitudes identified by Pink (2005) in *A Whole New Mind*. He notes that even the Education Ministry of Japan, a country that excels in math and science, is remaking its vaunted education system to "foster greater creativity, artistry and play" (52).

Waldorf educators also believe that pressuring children to attempt intellectual tasks before they are developmentally ready can lead to what Piaget (1969) referred to as "verbalisms" (164), using words that have no real meaning for them. For example, while children in the concrete stage of cognitive development can be taught to memorize and repeat abstract concepts, they most likely will not understand them on a deep level. This often leads to a dislike for school, or worse, contributes to the school-related stress that pediatricians find is on the rise (Wallace 2000, as cited in Crain 2005).

Storytelling. According to Hether (2001), "Waldorf schools appear to practice what voices crying for 'character education' desire: all elementary grade students are immersed in stories that offer moral lessons, ranging from fairy tales at earlier ages through fables, Nordic and other ethnic myths, and Biblical stories as they get older" (74). It is the Waldorf approach to storytelling, however, that is unique. First of all, both children and teachers often act out stories in order to make them come alive. Teachers are taught to create this dramatic atmosphere so that the moral principles in the stories are not only pondered, but also felt deeply, ensuring the information is processed in a deep and meaningful way. This approach is supported by research that tells us, "to ensure memory is available over time, information needs to be elaborately processed in ways so that it is meaningful to us" (Herrmann, Yoder, Gruneberg,

and Payne 2006, 87). Secondly, in a marked contrast to more overt approaches to instilling moral lessons, teachers in a Waldorf setting don't ask pointed questions about these stories or require direct analysis or judgment. Rather, they let moral lessons sink in, and help students build moral images by drawing pictures, role-playing or repeating verses related to the stories.

An Integral Place for the Arts in the Classroom. While the arts continue to disappear from traditional public education due to budget cuts and a focus on academics, they remain essential to the Waldorf curriculum. The inclusion of handwork, painting, music, dance and more "builds such thinking skills as analysis, synthesis, evaluation and critical judgment. It nourishes imagination and creativity… it fosters flexible thinking and appreciation for diversity, qualities that appear to be especially relevant to moral reasoning" (Hether 2001, 139).

Poets and writers alike have linked art and morality, perhaps none more eloquently as Ingersoll (1888):

> Art cultivates and kindles the imagination, and quickens the conscience. It is by imagination that we put ourselves in the place of another. When the whigs of that faculty are folded, the master does not put himself in the place of the slave; the tyrant is not locked in the dungeon, chained with his victim. The inquisitor did not feel the flames that devoured the martyr. The imaginative man, giving to the beggar, gives to himself. Those who feel indignant at the perpetration of wrong, feel for the instant that they are the victims; and when they attack the aggressor they feel that they are defending themselves. Love and pity are the children of the imagination. (paragraph 1)

Preserving a Sense of Wonder Toward the Natural World. Finally, Waldorf schools believe that nurturing relationships with other human beings and the rest of the living world is "the most essential preparation children need for grappling with the daunting social and ecological choices that technology will pose in the 21st century. Young people need to have direct experience of the natural world in all its diversity, messiness, and beauty if they are to appreciate its fragility and irreplaceable value" (Cordes and Miller 2004, 61).

What About The New Media Literacies?

It is important to note here that Hether's research focuses solely how these five aspects of the Waldorf curriculum contribute to the development of moral reasoning and ethical thinking. Additionally her research was conducted before Jenkins et al. (2006) identified the new media literacies. Yet, many of the skills that Jenkins and his team indicate are as essential to navigating the online world proficiently are already incorporated into the offline world of a Waldorf school. For example, working together to build a small structure (one of the many hands-on, collaborative projects in the curriculum) calls on *networking*, *negotiation*, *collective intelligence* and *distributed cognition* skills. The Waldorf emphasis on art cultivates *visualization*, *judgment*, and *appropriation* proficiencies. Dramatic storytelling develops *performance* and *simulation* skills. *Play*, considered a hallmark of Waldorf education, is also the first of the new media literacy skills. So despite not using any technology at all in the early years, these schools are continually practicing and honing the skills that are essential not only to developing the ethical thinking that will be called upon again and again in the online world, but also for developing the new media literacy skills that will help them navigate the digital world with competence and confidence… when the time is right.

The Right Time

As the digital world becomes more ubiquitous and participatory, Waldorf schools in general are realizing that, though they may be right about limiting access to technology in the early years, at some point they also should be teaching students how to extend these ethical and behavioral skills into the digital world. So in keeping with the developmental findings of both Piaget and Kohlberg, who believed that up until about 12 years of age children were still developing the cognitive capacities required for ethical thinking, it appears that middle school is the right time.

This is also the time when children's interest in all-things-digital reaches its peak. The Kaiser Family Foundation (Rideout et al. 2010) reports, "the jump in media use that occurs when young people hit the 11-14-year old age is tremendous. Their usage increases by more than three hours (3:00) a day in time spent with media (total media use), and an increase of four hours (4:00) a day in total media exposure" (5). Additionally,

Their emerging moral framework is being developed in an environment where there is little affective feedback, where there is a reduced risk for authoritarian-delivered punishment but the potential for being ostracized as a consequence of inappropriate behavior, where an individual is judged on the basis of what they write and not who they are, where there is a constant need to authenticate information to determine its truthfulness, where there is a high level of interaction with people from throughout the world and where there is the ability to act out different personas. The impact of interactions in this kind of an environment on the development of moral reasoning is unknown. (Willard 1997, 1)

In an effort to better understand these unknowns, Gardner and his colleagues at Harvard University School of Education's GoodPlay Project have been conducting research to discover what ethical issues young people encounter in the digital world. They have identified five areas of interest: *Identity* (how youth handle and perceive self-expression and identity online); *Privacy* (how, where and with whom youth share personal information); *Credibility* (how youth establish trustworthiness of people and information); *Authorship/Ownership* (how youth perceive intellectual property and practices like downloading/remixing content); and, *Participation* (responsible conduct and citizenship in online communities) (Santo et al. 2009).

Gardener (n.d.) finds the issue of *Participation* particularly troublesome. It seems the characteristics that make the digital environment so appealing to young people, its communal and participatory nature, are also what make it fraught with challenge. Because these spaces are so different from anything any of us have experienced in the past, they are void of established ethical practices or boundaries. Media scholar dana boyd (2007) states that what sets these networked publics apart from any other type of public space are these properties: *persistence, searchability, replicability*, and *invisible audiences*. In short, whatever information a young person may post to a public space, say, a photo or comment on Facebook, remains in the digital stratosphere forever, can be searched for and found by anyone and everyone, can be copied and shared, and has the potential to be viewed by strangers around the world. While young people can't be expected to understand the enormity of all this (nor can any of us for that matter) participation in networked publics by middle

school students is on the rise and has the potential to be either wonderfully empowering or incredibly damaging.

Digital Citizenship

Recognizing the need to equip students with the ethical skills to become good digital citizens, Common Sense Media (2010) developed a *Digital Literacy and Citizenship* curriculum. Based upon the digital ethics research of Gardner and the GoodPlay Project in collaboration with New Media Literacies, the curriculum for middle school students is divided into five units that directly align with the five ethical issues above. The overall goal of this curriculum is to "empower young people to harness the power of the Internet and digital technology for learning, and for them to become safe, responsible, and respectful digital citizens" (Common Sense Media 2010).

A Case Study

Recognizing the opportunity to build upon a strong foundation of ethical thinking and new media literacy skills, one Waldorf-inspired charter school in Southern California (Journey School) is currently engaged its second year of a three-year, classroom action research project integrating digital literacy into its entire middle school curriculum. This three-year program begins in 6th grade by teaching *Digital Citizenship* (primarily using the Common Sense Media curriculum). In 7th grade the students are introduced to *Information and Research Literacy*, learning how to apply critical thinking skills to finding and using digital information. In 8th grade they learn *Media Literacy* in a more encompassing way that "embraces the entire process of *accessing, analyzing, evaluating, creating* and *participating with* media" (CML 2011). Upon completion of the first year of *Digital Citizenship* students earn the privilege of bringing and using digital devices at school. So far the outcome of this program is adult (teacher and parent) acceptance and approval of digital usage at school. Plus there is school-wide atmosphere of respectful and positive use of technology. Upon completion of this three-year study, Journey School looks forward to sharing their results and best practices with other schools, Waldorf and non-Waldorf alike.

Conclusion

The digital world is full of both possibility and peril, with rules of engagement being hashed out as we go. While schools are still "hesitant to embrace new

technologies as a backlash from the significant, and largely ineffectual, investment in classroom computers as an instructional panacea during in the mid-1990's" (Collins and Halverson 2009, 140), young people have taken to the digital world and all its participatory wonders like ducks to water. Although they certainly don't need our help learning to operate the devices or the software (we need theirs!), they do need us to prepare them to use these powerful technologies responsibly and ethically.

Waldorf-inspired schools may have a successful formula for the development of ethical thinking and new media literacy skills. By providing rich sensory experiences and social interactions for students from the time they are very young, these schools are sowing the seeds of new media literacy without any technology in sight. The challenge they face now is taking the next step. In doing so, Waldorf-inspired could be the model for Ohler's (2010) vision of a "whole school approach to behavior that sets the entirety of being digitally active within an overall ethical and behavioral context" (145). Maybe some of these practices will even find their way into traditional schools, giving more students a chance to experience a developmental approach to new media literacy that will equip them to be creative, capable, and ethical users of today's technology, or technologies that are yet seeds in their imaginations.

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