

Digital Literacy in Education

Introduction

Digital literacy is the ability to understand information as well as evaluate and integrate it in multiple formats via the computer, electronic devices, and the Internet. One of the greatest challenges teachers face today is the barrier between differing technology skillsets between themselves and students. Teachers are charged with engaging students and providing quality curriculum to students who are known as digital natives, the speakers of technology, fluent in the digital language of computers, video games, and the Internet. Those who are not digital natives, are often coined digital immigrants, having adopted many aspects of the technology, but just like those who learn another language later in life, retain an “accent” because one foot is still in the past (Prensky, Listen to the natives, 2006). Students today have grown up using technology on a daily, sometimes continuous, basis (Linik, 2012). Students are constantly “wired”, or readily available and connected via the use of technology at any given time of day.

The digital age has afforded the ability for people, not just students, to access information at their fingertips. The days of looking up information in a book or encyclopedia are long gone. Those resources are still used, however, they are accessed digitally and the information is readily available regardless of location. School districts have implemented educational technology departments, instructional technology leaders, and professional development for teachers to learn innovative technology tools and integrate them into their classes. Billions of dollars are spent each year by districts across the United States on technology training and integration, yet there are still numerous teachers who balk the system and refuse to utilize tools they are not comfortable or familiar with in their classrooms (Prensky, Listen to the natives, 2006).

One of the greatest benefits of digital literacy and technology integration is the ability to collaborate, communicate, create, and think critically. Digital tools are like extensions of students' brains (Prensky, Listen to the natives, 2006). Why not utilize the tools students are familiar with and have readily available to engage and provoke students in the curriculum? Instead of looking at technology as a distraction, teachers should welcome it into the classroom and allow it work as a tool for innovation and student engagement. Educators need to step outside their comfort levels and learn with the students. As educators, learning is the focus in the classroom. The days of a stand and deliver classroom setup are dying out and collaborative environments are taking over. Technology is at the center of this new age type of learning environment. Students do not all learn the same way, and rarely do they all have something in common. Technology is the outlier. Today's students, whether they have the devices at home or not, are familiar, comfortable, and willing to experiment with technology. It offers the ability for a multi-dimensional classroom, diverse learning experiments, and a multitude of innovative experiences (Beavis, 2013).

Statement of Problem

It is argued that students today experience education much different from that of previous generations (Prensky, Teaching digital natives: partnering for real learning, 2010). He has worked with students and teachers at all grade levels and offers a technology infused perspective on prior pedagogies and curriculum. Students want to be respected, to be trusted, and to have their opinions valued and count. "The key change and challenge for all 21st century teachers is to become comfortable not with the details of new technology, but rather with a different and better kind of pedagogy: partnering" (Prensky, 2010, p. 3). Today's students want to learn differently than in the past. Educators must be able to allow students to not only be technology users, but

also experts. No one student knows everything about technology, but students often know more and are more comfortable with the tools than the teacher. This is where the term “partnering” comes into play. Teachers and students partner together and teach each other. Students feel a sense of pride and power in the classroom which allows the teacher to integrate the curriculum through the use of digital literacy (Ting, 2015).

Review of Related Material

21st Century Skills

The most commonly referenced 21st century skills are collaboration, communication, creativity, and critical thinking, known as the four C’s. These skills drive the idea of digital literacy. There are multiple technology tools and programs which enable students to utilize 21st century skills. Students are empowered to learn and synthesize information when given the freedom to work together and the ability to use technology tools within their learning (Ting, 2015). Digital literacy has provided students a method of learning by which they are able to use technology to go beyond the four walls of the classroom. Students today are able to work with other students and experts around the world from a single device. Access to information is immediate and students are able to build on that information using the plethora of online resources (Carey, 2014).

Finding and Selecting Information

The creation of the Internet made accessibility of information simple. The challenge is to select appropriate and valid information. As the Internet has grown and developed, there is an array of both good and bad information available. Educators are charged with teaching students how to access valid information and how to sort through everything on the World Wide Web. Custom web searches, filters, and Boolean operators have provided some ease of access, but

there is still a plethora of bad information posted on the web. Educators must first learn how to decipher good from bad information and then model that behavior for students to understand (Becker Jr., 2009). Students often “Google” a topic and take the first hit as truth, without checking the validity of the source. Anyone can post anything on the web. Information is quick and readily available, but it must first be analyzed.

Cultural and Social Understanding

Technology is available across the globe allowing students to learn and think more culturally diverse. The ability to take virtual field trips, talk with students and educators across the world, and gain insight and understanding is made readily available through the use of technology and digital literacy. Tools such as Skype and Google Apps for Education have allowed classrooms to transform into culturally diverse learning environments. Teachers are able to collaborate with one another across the globe and share their resources and experiences with one another (Kaufmann, 2003). An international field trip is very unlikely at most districts, but a virtual field trip can happen on a whim. Students are able to be exposed to culturally diverse environments without leaving the comfort of their own classroom.

E-safety. Digital literacy is founded on the web and access to information. Safety is a critical factor for students when accessing information electronically. In prekindergarten through twelfth grade, there are often filters established while on the school network. Not only are the filters not foolproof, they also provide a sense of security that is not realistic when accessing information elsewhere. Students are susceptible to a multitude of bad and deviant information, from gambling sites to pornographic material. The Internet has grown into a pool of information that can be used for various reasons, including luring young children into a world of crime, sex, and drugs. Explicit material is just as easily accessible as educational content. Sometimes

students stumble across inappropriate content by mistake and are lured into a world they do not understand nor are they able to escape sometimes (Smith, 2015). Internet safety is one of the most important and critical elements for parents and educators to teach children beginning at a very young age. The more educated students are about Internet safety, the more likely they will practice those skills while online.

Functional skills. Students must possess functional skills, basic skills required to be a functional member of society. These skills must first be established in order for students to use technology effectively. Functional skills are built upon from a very young age (Mohammadyari, 2015). Children learn to act independently and how to utilize specific skills and abilities based on situations, wants, and needs. In order for students to be able to integrate technology into their learning experience, functional skills must first be established and understood by both the student and teacher.

Conclusion

The theoretical model presented in this paper is a building block for an ever-changing technological world. The role of technology in the classroom is becoming more and more importuning in the digital world we live in. Educators are not only challenged, but also empowered with the ability to engage students through the use of technology and innovation. The idea that teachers are the experts and should stand and deliver information is far from the norm these days (Beavis, 2013). Of course, there are “old school” educators who refuse to branch out and embrace the technological world, but they are quickly exiting the school systems. New age teachers have also grown up with technology at their fingertips and are compelled to integrate it into their curriculum and pedagogical beliefs. Technology is not a one-size-fits-all tool. It provides the ability for educators to engage students and infuse information from a

variety of sources. Unlike traditional theories, technology is ever-changing, therefore research is constantly being conducted, data being collected, and new technology tools are being created and added to the classroom (Prensky, Listen to the natives, 2006). Digital natives are far more prominent in schools today. Educators should embrace them and empower them as a resource within the classroom.

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