

Instructing Digital Natives

EAD 801

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I. Introduction

Henry Luce, creator of *TIME*, *Fortune*, and *Sports Illustrated*, once said, “Not much longer shall we have time for reading lessons of the past. An inexorable present calls us to the defense of a great future.” It is with that belief this research project is grounded. When instructing this new generation of students, it is important to base methodology, content, and professional practices in the understanding that looking to the future will be more effective than living in the past. It is time to concede that these students do not learn best in the outdated educational model currently being used. With that in mind, this topic was chosen for two reasons: 1.) I have a personal love of technology and I chose Technology and Learning as the second specialization for my masters along with P-12 School and Postsecondary Leadership. Engaging with and mastering different technologies has been a passion for many years. 2.) My school is currently going through a major transition phase where half of the staff wants to utilize technology to its fullest, while the other half wants to continue with the traditional classroom setting. In addition to these two reasons, technology integration within the classroom is a vital component in the current American education system. Teachers require adequate skills to be effective models, instructors, and guides of technology integration. Therefore, what can educational leaders do to assist teachers along the way?

Background and Rationale

The backdrop of this entire research project is a small private school in a small town in Michigan’s Upper Peninsula. Manistique is a close-knit community of three thousand. St. Francis de Sales School is nestled right in the middle of this beautiful town on Lake Michigan. St. Francis, like many small private schools, has experienced a severe budget problem in recent years. Unlike many small private schools, St. Francis has been able to maintain an Instructional Technology Specialist for the past three years. Having an ITS has afforded great opportunities to discuss, plan, and implement effective technology integration within the school; however, there is considerable work required to completely

realize the full potential of the technology currently being employed. One particular challenge came this past March. Upon entering the school on a Saturday (the first day of Spring Break), a literal flood was noticed rushing from the school computer lab. The valves of the boiler/heating system in the ceiling above the computer lab broke and began shooting gallons upon gallons of water onto each computer, mouse, printer, set of headphones, etc. The entire lab, with all its components, was a total loss of approximately forty thousand dollars. This has been an obvious disruption to technology integration within the school as teachers are unable to utilize the school-wide computer lab.

Definition of Key Terms

In an effort to ensure absolute appreciation for the research, the following terms are defined:

Digital Immigrant – Marc Prensky in his influential article, “Digital Natives, Digital Immigrants” defines digital immigrants as ones, “who were not born into the digital world but have, at some later point in our lives, become fascinated by and adopted many or most aspects of the new technology” (2001, p.1).

Digital Native – Prensky also clarifies the definition of a digital native as, “‘native speakers’ of the digital language of computers, video games and the Internet” He continues, “Today’s students – K through college – represent the first generations to grow up with,” the technologies listed above. (2001, p. 1).

Technology Integration – According to Boni Hamilton, “Integration is when classroom teachers use technology to introduce, reinforce, extend, enrich, assess, and remediate student mastery of curricular targets.” Hamilton continues by pronouncing, “Integration is an instructional choice that generally includes collaboration and deliberate planning—and always requires a classroom teacher’s participation. It cannot be legislated through curriculum guides nor will it happen spontaneously. Someone with vision—an administrator, a teacher, or a specialist—needs to model, encourage, and

enable integration, but only a classroom teacher can integrate technology with content-area teaching” (2007, p.20).

The Research Question

Knowing there is a current disconnect between many teachers and students, a detachment that is only growing more problematic as students become more proficient in each new technology, this report seeks to find answers. The answers will lead educators everywhere down a path of enlightenment and appreciation. Our children are too important to continue educating deprived of technology, or possibly worse, without utilizing existing technologies. Consequently, what specific strategies can be used to help middle school teachers develop frameworks for instructing digital natives?

II. Review of the Literature

In “Digital Natives, Digital Immigrants” Marc Prensky explains, “It is amazing to me how in all the hoopla and debate these days about the decline of education in the US we ignore the most fundamental of its causes. Our students have changed radically. Today’s students are no longer the people our educational system was designed to teach” (2001, p.1). Prensky broadly describes two areas digital immigrants need to reconsider: methodology and the content. “Today’s teachers have to learn to communicate in the language and style of their students [meaning] going faster, less step-by step, more in parallel, with more random access, among other things.” This would be a major shift in digital immigrant methodology. Prensky also argues that all digital immigrants need to find a balance between “Legacy” and “Future” content. “‘Legacy’ content includes reading, writing, arithmetic, logical thinking, understanding the writings and ideas of the past, etc – all of our ‘traditional’ curriculum,” while “‘Future’ content is to a large extent, not surprisingly, digital and technological” (2001, p. 4).

The National Education Technology Plan designed by the U.S. Department of Education outlines five major goals, “with recommendations for states, districts, the federal government, and other stakeholders [to] address one of the five essential components of learning powered by technology” (2010, p. 7). The following goals are expected to be achieved by 2015:

- *Learning*: Change the learning process so it's more engaging and tailored to students' needs and interests.
- *Assessment*: Measure student progress on the full range of college and career ready standards and use real time data for continuous improvement.
- *Teaching*: Connect teachers to the tools, resources, experts and peers they need to be highly effective and supported.
- *Infrastructure*: Provide broadband connectivity for all students, everywhere—in schools, throughout communities and in students' homes.
- *Productivity*: Use technology to help schools become more productive and accelerate student achievement while managing costs (2010, p.1).

Although all five goals can be related to the overall research question, for the sake of being pithy, this report will focus on goal number three: Teaching. In order to attain this ambitious goal, the plan is designed to create more opportunities for teachers to have access to technology, utilize social networking technologies, provide technology based professional development, and develop teachers who are proficient in online instruction (2010, p. 20-21).

Andrew Marcinek, Director of Technology and EducatorU.org co-founder, pushes the school leader, “As an administrator, seek to promote a culture of sharing around technology along with a pace that is comfortable for every level of user. Reinforce the idea that learning goals and objectives -- not devices or applications -- still drive classroom engagement.” These are definitely important concepts school administrators should heed when requiring technology integration within a school. Marcinek

continues advising, “An administrator's biggest mistake is to make technology seem like a mandated item” (2014, p.1).

When asked by her principal to create a “technology rich school” Silvia Rosenthal Tolisano first asked to clarify the assignment as creating a “technology integration rich school” as she, “wanted the emphasis shifted from technology to integration and LEARNING!!!” She came up with four categories of a technology integration rich school: hardware, support, programs, and accountability. The model she has created is an excellent way to assist administrators in providing support for teachers integrating technology within the curriculum (2009, p.1).

Although standards are certainly not the only answer to effectively integrating technology in the classroom, standards can be used as a guide to monitor teacher progress in the process. The International Society for Technology in Education (ISTE) has created a list of standards designed for “evaluating the skills and knowledge educators need to teach, work and learn in an increasingly connected global and digital society.” The ISTE continues, “As technology integration continues to increase in our society, it is paramount that teachers possess the skills and behaviors of digital age professionals. Moving forward, teachers must become comfortable being co-learners with their students and colleagues around the world” (2008, p.1).

Ian Jukes and Ted McCain in “New Schools for a New Millennium” explain the new future is coming quickly, and we need to be prepared, “Technology will force us to redefine education. It is not here yet, but it is coming. We are looking at changes of enormous magnitude that will occur quickly. We must make massive preparations right now, we can’t just wait until it happens.” Jukes and McCain argue that content knowledge will “take a back seat” to process skills in the future classroom. As administrators across the country look to streamline technology integration in the classroom, it will be important to attend to Jukes and McCain’s advice (2005, p.16).

III. Methodology

In order to gain a better understanding of my school and district technology integration plan and potential strategies already in effect to assist teachers in the overwhelming task of educating digital natives, different processes were employed to gather information for this project. Two individuals within the school and district context were interviewed. Both interviews lasted approximately ninety minutes and typed notes were used to record pertinent information. There is 37 years of educational experience between the two; however, 30 of those years belong to one person. This wide range of experience proved exceptionally effective during the research process. Most importantly, though, both of these individuals are more than highly qualified to discuss technology integration at the school and district level. In addition, numerous articles, novels, and online resources were utilized during the research portion of the project. Each of these selections informed the overall progress of the research.

First, Edith Erickson, the Instructional Technology Specialist (ITS) at St. Francis de Sales School, was interviewed. Edith has been the Instructional Technology Specialist at our school for three years. As the ITS she has worn many hats including: problem solver, researcher, proficient planner, etc. Over the past two years Edith has been integrating technology into the school curricula throughout various grade levels (Kindergarten through 8th grade). This past year she began a program to improve reading and math skills in each classroom. Additionally, she is working on implementing a plan to infuse technology into all classrooms with the intention of assisting all different types of learners: gifted and talented (GATE), English as a Second Language (ESL), and several various learning disabilities (E. Erickson, personal communication, June 10, 2014).

The second interview was with Mark Salisbury, Superintendent of Schools for the Diocese of Marquette, and a 30 year veteran in education. Mark began teaching in 1984 and assumed his first position as principal in 1989. Since that time he has worked in different schools in different states but only recently (2006) began his career as superintendent. As superintendent for a vast diocese of nine

schools across 16,542 square miles of Michigan's beautiful Upper Peninsula, Mark has borne many responsibilities similar and very unlike a traditional superintendent in a Michigan public school. During his career he has developed many academic, social, and religious programs as well as implementing leadership formation, modifying the diocesan catechetical plan for all schools, overseeing the religion assessment (Assessment of Catechesis/Religious Education or ACRE), and constructing and employing staff professional development for all schools (M. Salisbury, personal communication, June 11, 2014).

IV. Findings and Conclusions

The major learnings through the duration of this research report all circle back to the Five Practices of Exemplary Leadership as outlined by Kouzes and Posner. As administrators begin the demanding enterprise of supporting teachers as these educators integrate technology into the classroom setting, it will be vital to remember the lessons learned through the Five Practices of Exemplary Leadership.

Model the Way

When asked how teachers (digital immigrants) can model responsible and meaningful use of technology for students (digital natives) both Mr. Salisbury and Mrs. Erickson expressed a concern for more discussion on digital citizenship within the classroom. Mr. Salisbury thoroughly discussed his displeasure with the negative impact social networking sites has had on the educator and the entire education field. Mrs. Erickson's perspective was a little more optimistic, but still very cautionary. The reason for this difference may be due to the fact that Salisbury is a digital immigrant while Erickson is a digital native. Salisbury called for strong guidelines, expectations, and consequences for teachers modeling irresponsible use of technology, "If a teacher posts something on Facebook that is contrary to the beliefs and mission of the school and diocese, he/she should face tough consequences. It is very important to teach our children the value of thinking before you post" (personal communication, June 11, 2014). Erickson replied, "You can model responsible and meaningful technology use by

incorporating tech into the presentation of your lesson plans, using technology as an organizational tool to show students how technology can assist in being more efficient, and providing tools to create a fun and safe online presence. Teachers must impress upon students the importance of digital citizenship” (personal communication, June 10, 2014). Both interviewees clearly stated this all needs to be overseen by the administrators. “It is the administrator’s job to provide support to the teacher through meaningful professional development in order to help the teacher model conscientious technology users” (M. Salisbury, personal communication, June 11, 2014).

Inspire a Shared Vision

The National Education Technology Plan calls for more collaboration in order to create a shared vision of technology integration. “Technology can support professional learning by making the practices of exemplary educators accessible to other educators.” The plan suggests using technology such as Skype or Google Drive to enhance teacher and administrator collaboration with the intention of assisting struggling teachers by pairing them with exemplary educators. “More than two decades of teacher research demonstrate the importance of collaboration among teachers. When teachers make their work public and examine each others’ work, the quality of their practice and student outcomes improve” (2010, p.45-46).

Edith Erickson explained her overall shared vision for technology integration within St. Francis de Sales School, “We must make sure technology is a tool to support the learning rather than technology being the sole purpose. We need to find ways to incorporate technology that supplements learning without monopolizing time. We should also find low cost technology solutions due to recent budget concerns as well as finding new uses for existing technologies and provide training in how to best utilize the technologies in classes and planning” (personal communication, June 10, 2014). “The key in [effective technology integration] is good instructional design along with a consistent vision and culture built by school administration” (Marcinek, 2014, p.2).

Challenge the Process

Ron Wolk contests, “Jamming new technology into a curriculum and a pedagogy that are essentially obsolete and ineffective with most of today’s students is a waste of time and money.” Wolk is obviously appealing to all educators to simply challenge the current process of placing new technology in a curriculum which is, “a 19th century invention.” Wolk makes the simile, “Squeezing technology into the conventional curriculum and schedule is like using a high-powered sports car to deliver the mail (2011, p.171). If educators challenge the process, they can begin to “accomplish [the] goal [of maximizing the benefits of technology] by showing the potential of technology as a powerful tool for personalization, learning, and assessment” (2011, p.174).

Marc Prensky reveals his belief that educators can change the process if they begin to change their own methodology as well as the content to reflect a more 21st century approach. “If Digital Immigrant educators really want to reach Digital Natives – i.e. all their students – they will have to change. It’s high time for them to stop their grousing, and as the Nike motto of the Digital Native generation says, ‘Just do it!’ They will succeed in the long run – and their successes will come that much sooner if their administrators support them.”

In addition to challenging the process of integrating technology within the classroom, William Powers, author of *Hamlet’s Blackberry: A Practical Philosophy for Building a Good Life in the Digital Age*, argues Americans need to challenge the process of integrating technology within everyday life. “The more we connect, the more our thoughts lean outward. There’s a preoccupation with what’s going on ‘out there’ in the bustling otherworld, rather than ‘in here’ with yourself and those right around you.” When we are connected all the time (even when we are sleeping) to literally everything and everyone in the world, we feel an obligation to “reach out and touch the whole world” (2010). It can be derived from Powers’ work that educators must be mindful of the negative effects technology can have, and that it is acceptable to disconnect intermittently.

Enable Others to Act

“Professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that enable and inspire more effective teaching for all learners.” The National Education Technology Plan outlines a specific plan for supporting teachers in order to enable them to act on integrating technology in schools. The plan recommends administrators, “Design, develop, and adopt technology-based content, resources, and online learning communities,” in order for teachers to have more opportunities for collaboration. The Technology Plan additionally recommends the use of “Technology to provide access to the most effective teaching and learning resources especially where they are not otherwise available, and to provide more options for all learners at all levels” (2010, p.xiii). When outstanding teachers are supported by the administration to provide insight into their practices, others on staff will be enabled to act as well.

Encourage the Heart

Both Mr. Salisbury and Mrs. Erickson believed encouraging the heart was the best approach to achieving success with technology integration at the school and district level. Mr. Salisbury expressed his opinion, “Administrators should make it a priority to recognize the strengths of the teachers in the school by visiting classrooms and participating in the lessons. Administrators should be conscious to recognize *all* teachers of their strengths even those who struggle more with technology. This will show those teachers that their efforts are being acknowledged and appreciated” (personal communication, June 11, 2014).

While discussing how to maintain an open line of communication between teachers and administrators Mrs. Erickson replied, “All teachers should have a copy of the school-wide vision and should discuss what this means for each teacher with an administrator so that everybody is on the same page. Providing efficient digital communication could also be helpful. Asynchronous communication is

more effective for busy teachers and administrators allowing teachers to participate in discussions on their own time leading to more thoughtful contributions than in a traditional staff meeting” (personal communication, June 10, 2014).

So What?

So what does this all mean for St. Francis de Sales School, all small private schools, all schools everywhere, and education overall? Simply put: it’s difficult. Providing specific strategies for technology integration can be done easily enough; however, actually implementing these strategies is the hard part. Andrew Marcinek declares, “As educators, we must prepare our students for their future, not ours” (2014, p.3). This is a challenging endeavor as it is hard enough to predict one’s own future, let alone someone else’s future. In addition, this “someone else” has been raised differently, thinks differently, and has been immersed in technology from birth.

Mark Salisbury and Edith Erickson afforded the overall outlook of technology integration support at St. Francis de Sales School and the Diocese of Marquette as deficient of required components, but optimistic in current progress. For example, the major findings between both interviews were a lack of shared vision among all teachers and administrators, and an inability to encourage an open line of communication between teachers and administrators. So what can be done to remedy these major obstacles to effective technology integration in the classroom?

All staff members possessing a shared vision for technology integration, as well as just about anything, is imperative to the progress of the school. The administrators should first get input from each of the stakeholders in order to find out what is most important to the majority. This is a form of Kouzes and Posner’s “encouraging the heart” as the leader is reaching out to actually listen to the employees. This is a huge first step. Beyond simply listening, the administrator then needs to start acting. Professional development opportunities need to be abundant and valuable. Additionally, “We

need to find ways to incorporate technology that supplements learning without monopolizing time in learning how to use the program” (E. Erickson, personal communication, June 10, 2014).

In addition to the lack of shared vision, it seems an open line of communication currently does not exist between administrators and most teachers. The quickest, and possibly easiest, way to establish effective communication is to provide different channels for communicating. Not all professionals feel comfortable walking into the principal’s office to discuss sensitive topics; therefore, the “my door is always open” policy isn’t necessarily always effective. Other methods of communication can be initiated such as online discussion forums, small group sessions, emails, etc. If more options are given to communicate, more people will be committed to the vision. If, even after this work, people are still resistant to communicate, the administrator can “start with the basics.” Kouzes and Posner’s Ten Truths about Leadership should be employed. As the old saying goes, “The definition of insanity is doing the same thing over and over and expecting different results.” Administrators need to look at each truth and evaluate what can be done better.

V. Summary

There are a number of strategies administrators can provide to teachers in order to help integrate technology into the curriculum. By utilizing the Five Practices of Exemplary Leadership (Model the way, Inspire a shared vision, Challenge the process, Enable others to act, and Encourage the heart) the school leader can provide proper support. St. Francis de Sales School, individually, has a twofold problem: lack of a shared vision and very little constructive communication. If the administrators employ the Ten Truths about Leadership, the Five Practices of Exemplary Leadership, and simply listen to the needs of all stakeholders, solutions can be produced.

These findings are important to all administrators as they continue working at creating a “technology integration rich school.” Prensky’s words are worth repeating, “It is amazing to me how in all the hoopla and debate these days about the decline of education in the U.S. we ignore the most

fundamental of its causes. Our students have changed radically. Today's students are no longer the people our educational system was designed to teach" (2001, p.1). As Prensky states, this report is important as we are meeting a proverbial crossroads in education: do we continue to educate children using an outdated model, or do we challenge the process by creating new, innovative schools that are immersed in technology? For the sake of an entire generation of children, let's hope the correct decision is made quickly.

VI. Appendix

The following interview questions are directly aligned with each of Kouzes and Posner's Five Practices of Exemplary Leadership:

(MODEL THE WAY) How can all adult staff members as digital immigrants within the school model responsible and meaningful use of technology to digital natives who have access to seemingly endless information and technologies?

(INSPIRE A SHARED VISION) As a school or district, what do you see as our overall shared vision for technology integration?

(CHALLENGE THE PROCESS) What strategies are we currently employing that we can alter, eliminate, or further develop in our current technology protocols?

(ENABLE OTHERS TO ACT) What type of support can we provide to teachers to ensure they can act on our shared vision for technology integration?

(ENCOURAGE THE HEART) How can we encourage an open line of communication between teachers and administrators to ensure that the teachers are confident and comfortable with implementing the shared technology vision, and how can we encourage our teachers to share their technology strengths to assist in aiding all other staff members?

VII. References

Hamilton, B. (2007). *IT's Elementary! Integrating Technology in the Primary Grades*. Washington D.C.:

International Society for Technology in Education.

International Society for Technology in Education. (2008). ISTE Standards Teachers. Retrieved from

http://www.iste.org/docs/pdfs/20-14_ISTE_Standards-T_PDF.pdf

Jukes, I. & McCain, T. (2005). *New Schools for a New Millennium*. The InfoSavvy Group and Cystar.

Retrieved from <https://www.ibo.org/ibap/conference/documents/IanJukes->

[NewSchoolsfortheNewWorld1.pdf](#)

Kouzes, J. M., & Posner, B. Z. (2010). *The Truth About Leadership: The No-Fads, Heart-of-the-Matter*

Facts You Need To Know. San Francisco, CA: Jossey-Bass.

Marcinek, A. (2014, March 11). Technology and Teaching: Finding a Balance. Retrieved from

<http://www.edutopia.org/blog/technology-and-teaching-finding-balance-andrew-marcinek>

Powers, W. (2010). *Hamlet's Blackberry: A Practical Philosophy for Building a Good Life in the Digital*

Age. New York, NY: HarperCollins Publishers.

Prensky, M. (2001). Digital Natives, Digital Immigrants. *On the Horizon*, 9(5), 1-6.

Tolisano, S. R. (2009, January 10). Components of a Technology Integration Rich School. Retrieved from

<http://langwitches.org/blog/2009/01/10/components-of-a-technology-integration-rich-school>

U.S. Department of Education Office of Educational Technology. (2010). *Transforming American*

Education: Learning Powered by Technology. Washington, D.C.: Education Publications Center.

Wolk, R. A. (2011). *Wasting Minds: Why Our Education System is Failing And What We Can Do About It*.

Alexandria, VA: Association for Supervision and Curriculum Development