Webibliography: Bring Your Own Device

Lesa McGarity

L24448761

EDUC 639-D01

Jennifer Courduff, Ph.D.

Liberty University

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Reference

Collins, A. & Halverston, R. (2009). *Rethinking education in the age of technology: The digital*

*revolution and schooling in America.* New York: Teachers College Press

**Summary**

The increased use of technology by individuals has traveled across the educational and business spectrums. Enthusiasts believe the technological advancements occurring in the worlds of business and entertainment must also take place in schools. Technology professionals and educators have predicted how teaching and learning will be changed by these new technologies. Collins & Halverston (2009) identify two arguments by technology buffs as to why new technologies will transform schooling. The first one is that educators will need to adjust curriculum to prepare students for today’s society as it changes with technology. The second argument is that technology gives teachers greater ability in educating students, and they should embrace these abilities to restructure instruction.

On the other hand, the authors look at skeptics who argue the value of using technology in schools. People familiar with schools indicate how the system resists changing its foundational approaches to education. The problem lies in the fact that it takes schools awhile to change. The skeptics believe the increase use of computers in schools reduces the rich diversity of classroom instruction and learning in the interest of commercial media. They also believe that technology will never be essential to educational instruction.

**Critique**

The two chapters I chose to review from this book reviewed two different sides of technology in education; the enthusiasts and the skeptics. Being of the same mind as the enthusiasts I fully believe that technology is necessary to transform schooling since educators need to prepare students for the changing society that encompasses the world. Technology also provides the tools that can alter traditional teaching and gain student’s attention to better educate students of all ages. How can technology not benefit education? What could possibly make the skeptics think that technology would not be beneficial to education? Skeptics argue that school districts are resistant to change and change occurs very slowly. Skeptics also argue that technology reduces the variety of instruction provided by teachers making education mundane and predictable. In other words, is technology beneficial or detrimental to education?

Collins & Halverston (2009) first identify how technology is changing every feature of the way individuals perform their jobs yet schools have not completely embraced this notion. Enthusiasts argue that if students are not prepared in school to utilize technology they will not be successful in their lives after high school. Technology can be incorporated into the classroom by changing the way we communicate with each other through the use of blogs, email, websites, etc… Technology can also change the way instruction is delivered by integrating video, images, music, and animation into the lessons, focusing the student’s attention on the topic. The authors also describe “just-in-time learning” which is when students need to learn something in order to complete a task you discover what you need to know. The internet is a perfect example of what students can utilize to finish, for example, a research paper. Technology can also manipulate or customize lessons to meet the needs of individual learners through a successful learning environment. An example of an enhanced learning environment would be the use of scaffolding with computer games. Skeptics believe that educators have struggled with these changing technologies and that technology has had little effect on schooling and instruction. Teachers are not provided the training, nor do some have the will to change. Skeptics believe that technology should only be used to enhance existing instruction. The authors imply that skeptics argue that new technologies provide a battle ground for students and their choice between entertainment and learning.

Despite the beliefs of both the enthusiasts and the skeptics I happen to believe that technology can provide a common ground in which to educate our children. Technology should not replace educational instruction provided by the teacher but a means of delivering the topic being discussed. Students need to be encouraged in the use of technology and how it is utilized in today’s society, not discouraged from using it. Educators need to channel the student’s interest, providing an avenue through the use of technology and combining it with the curriculum. Collins and Halverston’s (2009) review of both sides is thorough and informative which encourages the combination of both sides.

Reference

Faiola, A. & Matei, S. A. (2009). Enhancing human-computer interaction design education:

teaching affordance design for emerging mobile devices. *International Journal of*

*Technology & Design Education, 20,* 239-254. Doi: 10.1007/s10798-008-9082-4.

**Summary**

The ever-changing world of human-computer interaction design (HCID), proposes the increased need for educational researchers to identify theoretical models of interactive product design. Faiola & Matei (2009) indicate that such examples would call for an advance that would provide HCID students with a better understanding of the social circumstance of technology plan and development. An important part of this suggested educational model is the affordability or what functions the user would be interested in. Cognitive theory recommends individuals approach mobile devices with multiple utilities by constructing mental images of their utilities, beginning with how they look. The authors review a case study of an HCID instructional strategy, based upon affordability, highlights how students can be instructed on a variety of information areas for product design to sustain inspired analytical and decisive thinking skills. At the end of the study the students discovered that each function or utility of the device should be obvious to the user and be looked at as individual device features. These students can then identify how first-rate proposal can launch a suitable use of a device apparent and evident to its user.

**Critique**

I had never heard of HCID until I discovered this article and thought about how the topic applies to BYOD. Thinking about human-computer interface directly reflects how someone would consider what functions they want their personal device to do therefore guiding which personal device to purchase. How many individuals actually consider what they want their device to do and how many purchase for the social aspect of owning the particular device. These devices are developed through discovering what functions the end user is interested in. In other words, Faiola & Matei (2010) reviewed the theoretical and practical design approach of human-computer interface. They probed the relationship between technology design and its impact on the users understanding of control and execution of purpose. Their case study outlined could be used for further research and testing of integrating HCI teaching and theoretical approaches. Is this really being taken seriously by the average consumer? Does it need to be taken seriously by the average consumer?

The case study presented by the authors tasked three groups of graduate students to design a multi-functional mobile device. They were to start the design process based on how the device presents itself physically rather than functionality. This was very interesting since the ease of use has probably not been considered as important as the functions of the mobile device. The students were tasked to review the device’s problem space and use design innovation. They were to design from a human-centered perspective.

Despite my initial confusion understanding this article I believe human-centered interface design should be considered when developing personal mobile devices. The ease of use and the capable functions of a mobile device should be obvious to the user. When students understand affordances or quality they are willing to reveal how proper design can make appropriate use of a mobile device clear and obvious to the user.

Reference

Patten, K. P. & Harris, M. A. (2013). The Need to Address Mobile Device Security in the Higher

Education IT Curriculum. *Journal of Information Systems Education, 24(1),* 44-52.

**Summary**

The addition of ‘Bring Your Own Device (BYOD)’ to many educational institutions and corporations has generated concern with security of to various personal technological devices being brought into their schools and places of work. This year alone people will purchase 1.2 billion mobile devices, exceeding personal computers as the most common system for accessing the Internet, according to Patten & Harris (2013). They indicated the two leading mobile operating systems as Google’s Android OS and Apple’s iOS which both have security concerns as do their coinciding applications and their application markets. Though BYOD could reduce costs for the different organizations, and encourage student learning, not addressing the security of these devices could adversely affect those same costs. The authors focus on the necessity of security awareness for mobile devices. They propose that future IT professionals are made aware of the security issues and learn how to protect mobile devices through the incorporation of security into the IT Model Curriculum. They review one undergraduate IT program and develop a set of mobile device security education recommendations, which they then mapped into the IT Model Curriculum under the guidelines from Accreditation Board for Engineering and Technology (ABET). Their approach identifies one way higher education institutions could combine mobile device security into any IT program of study.

**Critique**

This article reviews a topic that is so important for the successful incorporation of technology through BYOD into not only the realm of education but the business world as well – security. BYOD has become very popular especially with the functionality the personal devices provide, mixing work with play. The professionals in IT departments are not fully aware of the threats and vulnerabilities mobile devices bring to their networks. If the IT professionals do not understand the threat of these devices then students, educators, and employees will not understand the threats either. Patten & Harris (2013) indicate education as a way to inform everyone of mobile device security with the best place to start being college students, especially those in information technology programs. Is education enough to fully understand the necessity of security for mobile devices? What about practical application and hands-on experience? Is theoretical understanding enough to provide the necessary security for mobile devices? The authors review mobile device security concerns creating recommendations for education that are in line with Accreditation Board for Engineering and Technology (ABET) accreditation standards. The authors then provide an example of these recommendations being adapted at a university and how they pertain to the security of mobile devices.

Patten & Harris (2013) insist mobile devices provide a means for individuals, whether they are a student, teacher, or employee to a company of working remotely while remaining connected to their files at school, place of employment which could be a teacher’s classroom files on her “Home” drive or an employee’s office. There are security concerns with these devices such as malicious malware, Android Operating System being open source, jailbreaking, rooting, and poor programming practices of applications. The IT professional needs to be educated on these concerns but there are so many of them, and new ones being invented daily, that how can an IT program cover each of them? The authors describe the IT Model Curriculum and Information Assurance and Security (IAS) within the IT curriculum. Information Technology curriculum is updated and a set of mobile device security recommendations are mapped to the IT Model Curriculum. Mobile Device Security (MDS) education recommendations include; security awareness, secure application development, security policy, security awareness training development, risk assessment and management.

Despite the development of the IT curriculum and MDS education recommendations, the need to attract, develop, and retain IT professionals are management concerns. These IT professionals still need to build the necessary skills and new IT professionals need to be attracted and retained. Businesses and school districts unrealistically expect new IT professionals to be productive on their first day of work. These young IT professionals may have the knowledge base of security for mobile devices but may not have experienced the new issues that have evolved.

Reference

Squire, K. & Dikkers, S. (2012). Amplifications of learning: Use of mobile media devices among

youth. *Convergence: The International Journal of Research into New Media*

*Technologies, 18(4),* 445-464. Doi: 10.1177/1354856511429646.

**Summary**

The creation of smart mobile devices, such as iPhone, Android, Kindle Fire, and iPad, have encouraged educators’ to incorporate mobile media into their instruction. Various applications, from clickers to game creation software, are flourishing in research settings which include schools. Unfortunately little is known about how students use these devices for learning outside of school. Squire & Dikkers (2012) use Social Construction of Technology (or SCOT) to add to the research literature identifying the technological affordances of such devices. This study reviews how one user group – adolescents – construct the technology particularly in regards to learning. The authors gave fully operational iPhones with unlimited data plans to three groups of youth to use throughout the day. These participants included homeschooled students, students from alternative schools, and students at an American public high school. These students valued these devices highly for learning, and created them for use as personalized devices for magnifying learning, specifically through increased access to information, social networks, and ability to participate anywhere they may be. The granting of access to mobile devices intensified the social status of these students since they were able to meet the goals of their teachers and peers. The authors also believed the use of these devices caused no problems for the most part with parents, teachers, and peers indicating how these students could participate more fully in society. The paper finishes with implications for how teachers/educators and software designers might best benefit from these shared affordances when devising for mobile-enabled classrooms.

**Critique**

The increased use of mobile media devices by young people has increased dramatically over the years. Through the use of smart phones and tablets virtually all high school students carry some sort of mobile device. Currently these devices are used for communication and entertainment by means of texting, social media, and listening to music. Will students actually be able to use these same devices for learning? Will they be disciplined to stay focused on the topic without gravitating to their entertainment sites? It has only been recently with the Bring Your Own Device policy that educators have been incorporating them into the classroom whereas before they would ban them.

Squire & Dikkers (2012) create a study to determine what practices young people engaged in with mobile media devices when on their own. The study also seeks to discover how they use these same devices in and out of school for learning by giving students devices and observing what they do with them. The authors use social construction of technology (SCOT) as their theoretical framework. SCOT is both a theory and a method for understanding how technologies have changed in response to what people need. The authors gave mobile devices to students in non-traditional and traditional settings, then collected observations, interviews, and documents to combine data sources.

Naturally students used these devices to look up information, settle arguments and debates, help others, or fill unused time. This is what students currently use their mobile devices for therefore I did not believe the study shed any “new light” onto the use of these devices. I believe students need to be directed by teachers as to what their devices are capable of doing for them in the classroom. This is not something they are going to investigate on their own. Unfortunately not all students have access to these devices making it difficult for a teacher to utilize them in the classroom. Until school districts make it possible for all students to have access to these devices it will be difficult to fully make use of them in the classroom. I did agree with the implications discovered by the study that the devices would provide access to a student’s mentors and teachers no matter where they may be. These devices will also enable a students to produce their work and publish it for feedback or consumption.

Reference

Thomas, K. & O’Bannon, B. (2013). Cellphones in the classroom: Preservice teachers’

Perceptions. *Journal of Digital Learning in Teacher Education, 30(1),* 11-19.

**Summary**

It seems natural to discuss with veteran teachers their opinion of using mobile devices in the classroom. Thomas and O’Bannon (2013) take a different approach by performing a study on the opinions and perceptions of preservice teachers. The study uses a survey to examine the views of 92 preservice teachers in a small Midwestern liberal arts college. The survey took into consideration their support on the use of cell phones in the classroom, the benefits of some of their functions for school, and also the benefits and barriers of their use. The study also looked at the age of the preservice teacher to determine if age was a factor of perception. The study revealed that preservice teachers believed there were benefits in the use of cell phones in the classroom, particularly the calculator applications, accessing the internet, and media player to name a few. More than half of the teachers also identified anywhere/anytime learning opportunities, differentiated instruction, increased student engagement and communication. The authors also identified the preservice teachers concerns which consisted of possible classroom disruptions and cheating. The survey found no relationship between preservice teachers’ age and perception. The study’s results also revealed that teacher education programs should incorporate teaching/modeling with mobile devices in classroom instruction along with Bring Your Own Device.

**Critique**

Mobile devices are being recognized as beneficial tools in classrooms. Unfortunately there are teachers who believe the mobile devices are merely classroom disruptions. Thankfully there is a shift in this concern with the emergence of Bring Your Own Device and the positive impact the devices could have on learning. A reason for this shift is the younger generations of teachers has come into the classroom and believe in the benefits of technology. Do the majority of preservice teachers believe in the use of technology? Why did the authors only survey one college? Can the views of this new generation of teachers alter the opinion of teachers who have been in the classroom for 10 – 20 years without the benefits of mobile devices? It seems that these preservice teachers should be able to influence the current policies established by districts if students are to be successful in today’s technological world.

The study conducted by Thomas & O’Bannon (2013) was interested in the views of preservice teachers and, whether cell phones should be utilized in the classroom. It seems that using the opinions of a small Midwestern liberal arts college would be biased and not a true reflection of all preservice teachers. Furthermore, this study of cell phone use leads this writer to believe that all preservice teachers are eager to embrace the use of cell phones in the classroom when in all actuality there are preservice teachers who are not technology savvy and would resist the use of cell phones in their classrooms unless they received then necessary training in their teacher education programs as represented by the 52% who were unsure of the use of cell phones in the classroom.

I happen to believe the use of cell phones/mobile devices would be beneficial in the classroom. There are a variety of reasons why which include the many applications available for educational purposes, accessing the internet, and especially anytime/anywhere learning opportunities. I also understand the barriers using cell phones in the classroom represent such as cyber-bullying, class disruptions, and cheating. It is understandable why preservice teachers believe in the use of cell phones in the classroom since they grew up with technology and personally use these devices. Thomas & O’Bannon (2013) should have used a larger sample for their survey to get a better perspective on the views of preservice teachers.