Implementation of Technology in Classrooms

There is an ongoing discussion concerning the use of technology in the schools of the United States. On one side, people feel that it is absolutely necessary to incorporate technology, such as computers, tablets and the internet etc., in order to best assist the children to reach their full potential as adults. On the contrary, dissenters believe that the expenditure of resources, such as time and money, far outweigh the benefits to the students. Regardless of one's opinion concerning this, it is clear that teachers will have a pivotal role to play in the success or failure of this movement. Teachers will no longer be only held accountable for teaching their everyday classes, but now must also educate the students to become literate in the use of technology. In general, technology is an extremely useful tool to students, but the teachers themselves are not always prepared well enough to feel comfortable using this technology themselves; let alone incorporate it into their daily curriculum and teach their students not only how to use it, but must also educate the students on how to make it beneficial in their studies.

Teachers have not always had to be concerned with the use of technology in their classes. As recently as the year two-thousand, teachers were not required to have any courses in educational technology to obtain their teaching license in as many as eighteen states in the United States. In fact in a survey performed by the National Center for Education Statistics, a mere one-third of full-time public school teachers felt comfortable blending computers into their everyday curriculum (Jones 2). These teachers felt they not only lacked adequate training in the use of available software, but also the knowledge needed to create lesson plans that incorporated technology. The training that was given them was felt to be disconnected from the classroom, lacked needed follow-up, and fragmented (Jones 3). Principals and administrators recognized

that an increased effort to make teachers feel comfortable using this technology would be essential to the successful introduction of technology to the students.

In order for the teachers to successfully make their students more computer literate, the teachers themselves must be familiar with the technology and comfortable enough in its use to pass the knowledge onto the students. Essentially, the teachers have to know more about using the software available to the school than their students. This is not acquired through a one time, five hour lecture once a year, but through regular, hands-on training provided by the school (Kirkscey 7). In a study conducted on an average sized school in Indiana, researchers looked at a group of social studies teachers. These teachers lacked most general knowledge about using computers and were unaware of the vast range of resources available to them. During the study, the teachers were educated on a variety of software that had the potential to capture the students' attention, while educating them in a new and exciting way. After the two day workshop, the teachers felt significantly more confident in their ability to teach students how to make connections between the projects, classroom curriculum, content and community resources (Shriner 41). These resources had been available to the teachers all along, but they had lacked the skills and knowledge of how to access it. Now that the school had provided the training, the teachers found it easier to convey the information taught to them at the workshop to their students. Given that this was a small study based in one school, it still shows that technology can be successfully implemented into a school in a way that is beneficial to the students and teachers alike.

Technology is found all over our society in today's time era. Some believe however that it has no place in the classroom and the most effective way to teach is to go "back to basics" (Honan 36). The people who hold this view point out the fact that paper and actual textbooks

would be much less expensive than bringing in new technology. Not only is expense a large complaint, but now teachers are being held accountable to teach their everyday class and practically teach a technology class at the same time, while still preparing the students for the written tests that rank schools on a national and state level, such as the ACT or MEEP (Honan 37). Another issue is that some students simply are not able to transfer their print literacy to digital literacy (Honan 41). There was a study done by Eileen Honan that focused on four average teachers. In this study, these teachers had their students develop a PowerPoint presentation with the purpose to teach the students how to write a comic strip. When the project was completed it was evident that the students understood how to make a PowerPoint, however missed the point of the assignment. This was evident though as one teacher said "There was no punctuation… he didn't use his plan…so whether he got distracted and carried away with the whole digital literacy, it's not right" (Honan 41). Teachers can also run the risk of focusing on the operation of the project, so how to make a PowerPoint, instead of stressing the construction of the text in the project. So instead of teaching the students the subject itself, the class's focus turns into how to make a PowerPoint.

When things go right, technology can be a very powerful tool to students in the classroom. If the students already knew how to use the software available to them, then the teachers would be able to focus on their main subject and not have to double up as an unpaid technology teacher. While many teachers felt capable of showing the students how to use the software, many were dubious that there would be enough time in class to teach both subjects (Kirkscey 5). One solution that was proposed for this problem is to offer a technological literacy class, which would teach the students how to use the programs available to them through the school (Kirkscey 6). If this class was offered to students, the teachers could then use the time

they normally use to teach themselves about programs and instead, focus on deciding the most effective way to plan their class's curriculum while including the programs taught to students in the technological literacy class.

Ideally the most important aspect of students learning through technology is the teacher. This teacher must first encourage the student to engage in using the technology. Then the student needs to be encouraged to discuss with peers the goals of the activity while maintaining a loose interaction with the teacher. The teacher must also be flexible enough to adapt the curriculum to the individual needs of the student, while allowing room for the student to make the project their own. If the teacher is bias against using technology in the classroom, it must be left outside of the classroom because it will directly affect the student's attitude of using technology in school (Ching-Ting 93). However, the teacher is not solely responsible for the student's experience. The student also bears responsibility for their experience. Ideally they have access to a computer at home that is compatible to the computers at school and has prior knowledge using the software. The student must persist in working with the program and be patient. The more time the student spends using the program, the easier it will be. Age is also a factor as studies have shown older students generally do better working with the program than younger students (Ching-Ting 92). The interface of the technology should be intuitive for the student's to use, that way the student focus on the task at hand and not the program itself (Ching-Ting 93). When all of these aspects come together in the same scenario and the teacher is mediating between the student and the technology, it maximizes the student's learning experience.

Some people ask why we should waste money by putting technology into such young classrooms. What they do not understand is that today's youth is commonly underestimated. In a survey, it reported that children as young as four years old are capable of using a search engine

with ease (Ching-Ting 94). Another example of how smart our society's youth can be is demonstrated by kindergarteners. In some schools, kindergartners are being taught basic programming skills by simply playing games on the computer, such as giving commands, sequencing events and debugging programs (Ching-Ting 94). These are skills that some adults do not even know, and the students are four years old. The children are growing up in a time where they use technology every day, and they are being taught how to correlate that into the classroom without even knowing it. Some teachers are unaware of the technological skills these young students already possess, and therefore do not expand upon the knowledge they already know. These students are also generally capable of teaching their elder family members how to use the technology that they are familiar with, that often times older members of the family are not, which can provide an excellent opportunity for family bonding.

A common belief found in people who do not believe technology should be in the classroom is that by using technology more often it prevents the students from interacting with their classmates, therefore hindering their social skills. However, only one credible study has been found to back this view point, while there are many more studies that have contradicted this belief (Ching-Ting 95). Technology has also been found to help young children's development of understanding multiculturalism (Ching-Ting 95). There are many programs that are specifically meant for certain ethnicities, for example Dora the Explorer. These programs can allow children to learn about their own cultural ties while still living in America. It also allows children to learn about other cultures, thus promoting multicultural awareness from an early age.

Technology in the classroom, whether young or mature, can be extremely beneficial to both students and teachers alike. However, this can be a difficult goal to achieve, with many potential stumbling blocks that can be encountered along the way. One of these is the cost of

obtaining and maintaining the technology in the classrooms. Another aspect that needs to be addressed in order for the implementation to work is that teachers are properly prepared. If the teacher is not confident in their own abilities for using the technology available, how can they be expected to teach others to use it? Teachers should be given technology in-service days regularly in order for them to become comfortable using the programs. In order to allow the teachers to focus on the subject they were hired to teach, there should be a technology literacy class offered to students. This would then free the teachers from having to teach technology on top of the required subject, thus allowing them more time to plan out how best to incorporate technology into their everyday class. Technology in the classroom is a good thing and we as a country can provide the technology and skills students need to use these resources. Once the country actually decides to implement technology equally to all schools, all that is left to do is reap the benefits.

Works Cited

Ching-Ting, Hsin, Li Ming-Chaun, and Tsai Ching-Chung. "The Influence Of Young Children's

Use Of Technology On Their Learning: A Review." *Journal Of Educational Technology*

& Society 17.4 (2014): 85-99. *Academic Search Complete*. Web. 10 Mar. 2015.

Honan, Eileen. "Barriers To Teachers Using Digital Texts In Literacy Classrooms." *Literacy*

42.1 (2008): 36-43. *Academic Search Complete*. Web. 12 Mar. 2015.

Jones, Cathy Areu. "When Teachers' Computer Literacy Doesn't Go Far Enough." *Education*

Digest 67.2 (2001): 57. *Academic Search Complete*. Web. 26 Mar. 2015.

Kirkscey, Russell. "Secondary School Instructors' Perspectives On The Integration Of

Information And Communication Technologies (ICT) With Course Content." *American*

Secondary Education 40.3 (2012): 17-33. *Academic Search Complete*. Web. 6 Mar. 2015.

Shriner, Michael, et al. "Social Studies Instruction: Changing Teacher Confidence In Classrooms

Enhanced By Technology." *Social Studies* 101.2 (2010): 37-45. *Academic Search*

Complete. Web. 12 Mar. 2015.

Works Consulted

Barnette, Elazer J. "The Role Of Technology Teachers In Ensuring Standards-Based Programs."

Technology Teacher 62.7(2003): 32. Academic Search Complete. Web. 6 Mar. 2015.

Reed, Phillip A. "The Journey Towards Technological Literacy For All In The United States--

Are We There Yet?." Technology Teach 67.3 (2007): 15-22. Academic Search Complete.

Web. 6 Mar. 2015.