<u>Sources</u>

1) Nelson, Matthew L., and Roslin V. Hauck. "Clicking to Learn: A Case Study of Embedding Radio-Frequency Based Clickers in an Introductory Management Information Systems Course." <u>Journal of Information Systems Education</u>. 19.1 (2008): 55-64.

2) Doggett, A. Mark. "The Videoconferencing Classroom: What Do Students Think? " <u>Journal of Industrial Teacher Education</u>. 44.4 (2007): 29-41.

3) Cavanagh, Sean. ""Green" Classes Flourish in Schools." <u>Education Week</u>. 28.20 (2009): 1, 13.

The integration of technology into the classroom can be both a very useful and daunting task. The technology being integrated is designed to overcome a specific hurdle provided within the education environment but, at the same time, it can create its own hurdles for the students and teachers. Within this paper I'm going to discuss a few specific applications of technology to the learning environment, their effects on the overall learning experience, and even how they can modify the entire situation all together.

The first technological topic I'd like to cover is the growing trend in developing "Green" classes. There is a growing trend in the development of classes aimed at ideas of conservation and reusable power (source #3). The article *"Green" Classes Flourish in Schools* outlines how schools have been using these sort of classes to educate students about these sort of issues through practice and research of the current fields of work in the subject area. This can extend well past the physical classroom however. Applying the "Green" theme directly to the class work can bring about conservation through the direct use of specific formats of technology without even altering the physical classroom. Through the use of "thumb drives" and email students can turn in papers to their teachers without ever touching an actual piece of paper. With some basic word processing/typing knowledge and access to computer equipped with a word processing program, students can write there papers and turn them in by simply attaching it to an email or copying the file for the instructor. This can be both resource and time saver as students only have to apply a few extra steps to writing process and no longer have to use ink or paper to turn in assignments. As stated in the article *"Green" Classes Flourish in Schools (Source #3)*, these "green" classes help raise the students awareness of the environmental and

at hand and even can help encourage political awareness as this is currently a hot topic in the political/world spectrum. The resource savings can also be financially beneficial to students considering that a thumb drive can be purchased for less than an ink cartridge.

Video conferencing is another technological application being applied to classrooms. This application can actually completely alter the entire classroom learning environment. Rather than requiring students to all meet in the same classroom for the lesson, all the students need to attend class is a computer with an internet connection capable of running a video chat program. According the article *The Videoconferencing Classroom: What Do Students Think? (Source #2),* this technology is beneficial to the classroom setting for students have greater distances to travel to attend class as it almost completely eliminates the time and cost of the commute. This method can also increase teacher availability as it opens up a visual medium during a time in which the teacher doesn't even have to be at the school. The teacher could hold "office hours" from their own house if they wished to do so. Despite the numerous positive aspects this type of system can bring to the classroom, there are drawbacks for the students however. According to the survey provided in the source (Source #2, pg. 7) 80% of the students felt they would have been "more engaged" in a real classroom, 57% believed the video conferencing to actually be a "barrier" between them and their instructor, half of the students said that the use of video conferencing actually encouraged them to learn independently, and worst of all only one third of the students said they would take another course that used video conferencing technology. When taking all of this into consideration it's obvious that while there are many positive aspects to this, the students largely do not favor this sort of a medium for learning. As a result, this sort of technology should probably be used as a supplement rather than the base method of communication between student and instructor.

Another growing method of integrating technology into the classroom is through the use of "clickers" and CRS (Classroom Response System) (Source #1). These systems are put into classroom use by providing each student with a remote "clicker" that they can use to answer questions provided by the instructor in class. A system collects the answers and charts who answered which can be used to enhance many classroom activities such as in class quizzes, attendance taking, conducting surveys, and engaging students in lectures by asking questions about the covered material. The article (Source #1, pg. 4) sites various other advantages of using this system including providing instantaneous feedback to the professor, encouraging student attentiveness, and a means of motivating student participation. The article also cited (Source #1, pg. 7) improvements in student perceived performance, student attendance and participation, correlation between attendance and course grade, perceived exam preparation, perceived learning and interest in lectures, as well as depth and speed of student feedback. On the other side of the matter, students are often expected to pay for their own clickers which adds to the high cost they already pay for books.

All of these technological applications have a place in the modern classroom. They can benefit both the students and the teachers. They do bring about an increased responsibility on the teachers behalf though. The teacher must be able to use and understand the software at a high level and also must integrate it into the classroom environment effectively. Without effective use and integration, the desired results aren't achieved and theses methods end up becoming a waste of time, resources, and hinder the students overall classroom experience.

Integration of Technology and the Classroom

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