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English 111 SEC 315

17 August 2005

"Computers are Changing the Way We Learn: Education in a High-Tech Classroom"

As I sit here typing away on my Toshiba laptop with obsolete 2.4GHz technology, my mind has managed to dislocate itself from my homework, use the mouse pointer to click on that fancy, blue 'e' Internet icon on my quick links toolbar, and guide me to about ten different websites within a matter of three minutes. I'm able to stop it if only for ten minutes, then my stimulated mind manages to break away and head back to the multimedia websites that are fun filled and exciting. Meanwhile, in the back of my mind, I know that I have a paper due that I have been procrastinating on because I haven't had the desire to do it myself. After all, word processors don't have any catchy banner advertisements reaching out at me to 'Register Now for a FREE iPod' or attractive midi music to entertain me. These things do my thinking for me. The banner tells me I need an iPod, and the music lets me know if I need to cry or laugh. I don't want to have to do my own thinking anymore because my computer has always been able to do that for me. If there were pop-up banners in Microsoft Word ecstatically telling me to 'Put Underlying Cause Number One HERE!' or, 'Insert Transitional Phrase NOW!' and showed a cute little purple monkey pointing it out for me, I would've been a professional writer a long time ago. My point being that using multimedia through computers for education has mostly inhibited learning with the exception of a few key benefits beginning with the elementary level which includes use of PowerPoint presentations and software integration such as games.

When in presidency, Bill Clinton had made the statement emphasizing the importance of computers in the classrooms. He believed that children should learn to become computer literate as early in school as possible, so that they would not be left behind as the technology advanced in school. The schools even cut out traditional classes to make room for more

technological studies. Children need to learn how to utilize the advantages that are available through using the interactive tools supplied with computers. Children learn better when they are excited about new educational games and media that capture their attention as compared to traditional written text. This is a very powerful method of teaching, but teachers will have to be careful in how they use this technology because it can backfire. If a teacher were to introduce an interactive game to the class as homework, the children may want to play another game about half-way through the assigned game. Thus, they will not have completed their homework and the teacher did not succeed in their goal. There is an exception. In more responsible younger adults, most will devote their time to the task at hand rather than play an impractical video game. On the contrary to former President Clinton's statement, Michael Bellino, an electrical engineer at Boston University Center for Space Physics, states that the educational system needs to "Teach carpentry, not hammer. We need to teach the whys and ways of the world. Tools [computers] come and go, teaching our children tools limits their knowledge to these tools and hence limits their futures." (Oppenheimer 13). I agree.

Psychologically speaking, the brain is divided up into two different hemispheres; the right and left hemisphere. Sherry Dingman, associate professor of psychology, basically states that the right hemisphere is in charge of creativity that, for example, allows you to paint a picture or write a poem. The left hemisphere is responsible for the more logical processing used in reading or studying (Saddy par. 3). When information is presented in a multimedia format, "the left hemisphere… understands words at about the level of a six year old child, which means, it's not very reflective." (qtd. In Saddy par. 4) Otherwise, if the information was presented in a traditional printed format, this hemisphere would comprehend it at a much higher level. Guy Saddy, a columnist for Elle Magazine and Saturday Night, confirms that "when we consume information via multimedia as opposed to reading it's printed text, we use our brains in an entirely different – and potentially dangerous – way." (Saddy par. 2). The children are essentially

distracted from the important material that they should be learning. All the while computers are being pushed into the classrooms.

> There has been no good evidence that most uses of computers significantly improves teaching and learning, and yet school districts are cutting programs-music, art, physical education-that enrich children's lives to make room for this dubious nostrum, and the Clinton Administration has embraced the goal of "computers in every classroom" with credulous and costly enthusiasm (Oppenheimer 3).

One example of multimedia being taught amongst students is through Microsoft PowerPoint. Here, students are able to create and direct their own fun, visual presentations and present it to their fellow peers. In the case of one particular fourth grade physical science class in North Dakota, participation and learning results were considerably high. This small classroom utilized not only the software, but also digital cameras, video clips downloaded from the internet, and colorful animation that were all included into the PowerPoint presentations. "The students assumed roles of both learner and teacher through the process of creating their slideshow. Each group developed a certain expertise to share with their peers in interesting ways." (Santangelo and Guy 24). These desirable results were produced because the teachers were able to keep a close watch on the students and it didn't backfire on them. If Santangelo and Guy had not planned this assignment in the detail that they did, it might have failed and the students may have been sidetracked. The students would have been so stirred up about including the fun pictures and video that they would not have comprehended the scientific material that was being taught. Another dangerous side effect would be the actual physical typing of the information on the slides. When children write things down on a computer screen, they stand a significantly low chance of actually remembering the material because they are not committing it to their memory. They are actually committing the information to the screen (Stoll 48). Without storing it in our memory, students will not be able to recall it during critical times.

Another example of multimedia that has effected the way students learn in the classroom is through computer software such as educational games. Children have the opportunity to play games and learn at the same time. This form of interactivity, similar to the PowerPoint presentations, also gets the students very excited. Most of the educational game playing takes place at home when the mothers come home with a new game for her kids to play. She hopes that it will stimulate them to learn new things that will enrich their knowledge, unlike that 'other violent game with no intellectual stimuli.' In most cases, it works. But, children have a short attention span and won't play that particular game for very long, and eventually they will lean right back into that 'other game'. The authors of <u>Computers and young children: Social benefit or social problem?</u> support this idea by saying:

> Turning to computing in the home, one early ethnographic study of children from affluent families discovered that little educational computing was going on (Giacquinta et al. 1993.) About half the families had purchased computers with their children's education in mind. Nevertheless, most children avoided purely educational products and played games instead. Only 20% of the children were using the technology to develop skills in mathematics, reading, science or critical thinking. Even among this group, educational software use was sporadic and of short duration. In essence, children were using home computers for everything but education (Attewell, Suazo-Garcia, and Juan 281)

Once again, computers in the classroom can either have a negative or positive effect on children depending on how their teacher will introduce and use it. Educational gaming in general, has inhibited not only the students' ability to learn well in school, but has also introduced bad social health problems.

As mentioned earlier, using multimedia in the classroom has had both positive and negative effects on students' education, most of which tends to have more inhibiters than benefits. PowerPoint presentations can create a great way for students to get excited about learning, but at the same time, because of the nature of the slides presented, the material will be right there

for the students to read, but the logical side of their brain can only consume a small amount of information. Games will also have a similar effect. They will get students excited about learning, but not only will their minds not consume the information they need, they may also affect their social behavior that may effect them for the rest of their lives. And because education builds up on itself through Elementary to Junior High and onto higher education, teachers need to be careful on how their present multimedia to their influential young students.

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