Smart Media in Education: Is it a Blessing or a Curse?

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I am a living history of media and educational technology

Now that I have lived almost 60 years, I have become a living witness of the dramatic changes in media and educational technology. The biggest change first took place for me in 1961 when I was a kindergartener in Seoul and my Dad set up a tiny B&W television in the living room. It was a historical event that transformed the nature of everyday life in my neighborhood. Our living room had become a sort of village center, bringing our neighbors and friends together for the daily ritual of viewing the world via a black box.

When I was a high school student in Montego Bay, I used a slide rule to do my math. A year later, when I enrolled in an engineering program in Wisconsin, I invested a hefty sum of $240 to buy a Bowmar 901B, the first American-made pocket-sized calculator. It had all four functions (+, -, x, /) and eight digit red LED display. I had to wait a whole year to upgrade it to one that had eight functions, which nowadays are given out free when you buy a pack of dozen pencils. Back then, I proudly holstered the calculator on my waist like a cowboy holstering his gun. Considering that it was the time when other engineering geeks wore a slide rule on their waist like a samurai sword, flaunting a digital calculator was the ultimate geek fashion statement.

As a sophomore in engineering, I had to learn to use something called “analog calculator” to solve calculus problems. I actually had to make hardwire connections on a wooden plate just like a computer chip has many wire connections on a silicon wafer. The main difference was that the wires I had to connect were a billion times thicker than the copper wires on a microchip. In my senior year in college, I was allowed to encode
computer programs on a stack of punch cards and run them through a main frame computer that was as big as a classroom. Then, in my graduate research, I used a desktop Apple II personal computer, which was as powerful as the main frame computer that filled an entire room a couple of years earlier. The floppy disks soon replace the punch cards, only to be replaced by compact disks and flash memory chips.

In the meantime, the technology started to change the classroom scenery. When I first became a professor, I used an overhead projector to project information on a screen. Soon, I had to throw away thousands of transparencies that I had collected or personally prepared because the ‘age of PowerPoint’ had arrived. The power of visual media has become both personal and personable. But, I have also seen students suffering in PowerPoint Hell where all they heard was the professor saying “next, next” flipping slide after slide in a hectic pace ad infinitum.

In the Fall of 1991, I gave my first distance learning lecture to GM employees. The lecture was videotaped and the tapes were delivered to the sites for viewing using a video cassette recorder. A few years later, my lectures were live-telecasted to students at several distance learning sites simultaneously. Soon after, the telecasting became two-way street and I was interacting with distance students face-to-face in real time. Now I teach in a studio that has a dozen cameras and a huge split screen that shows me, my students, my PowerPoint notes, electronic blackboard, and real-time students’ responses even to my supposedly Socratic questions. Previously what was a two-way communication between my students and me has now become multi-pointed interaction among students, oftentimes bypassing me altogether, much of it mere noise. Questions, comments, requests, and complaints from students and administrators inundate my email box, web pages, smart phone, and SNS text messaging. No wonder my head is becoming rapidly bald.

I wonder what new gadgets I have to buy and learn to use to connect to my students. Is simply talking to real people gathered in a real space no longer enough to be considered a really good education? Smart media seem too smarting for me. Does that mean I am a passé? I, who won numerous teaching awards and recognitions but incapable of catching up with the innovation in technology, must be considered an old fart? Or, is the smart media not smart enough for those of us who are still pursuing teaching excellence? Is it education or entertainment? Perhaps it’s both, an edutainment?
Whatever it has become or is in the process of becoming, considering the fact that the number of my online students in just one month this Spring exceeded the number of students I have taught in the past 25 years on campus, the arrival of smart media is definitely to be celebrated, at least from the financial point of view and from the sheer impact it can have on our learning community. It has opened up a huge market, leveled the learning field, and provided unimaginined opportunities to many people. It is indeed a force to be reckoned with in earnest. Smart media seems to be both a curse and blessing – a curse for educators but a blessing for students.

A Korean context

As described in the above, I have witnessed educational technology evolving over the years. The nature of communication became faster, multi-dimensional, multi-directional, and omnipresent. Consequently, the center of education shifted continuously from teaching to learning, from teachers to students, from authority to laypeople.

Although educational technology is just a set of tools for us to use in the way we want, once it became complex and ubiquitous, it seems to assume a life of its own. Just like a living species it not only evolves but can also make quantum jumps, a sort of revolutionary change that stirs up the order of nature. Such a revolution took place in 2001 when MIT announced that it would make available all of its more than 2000 courses online, free to the world, in pursuit of its mission to advance knowledge and educating students in the era of internet. What is known as OpenCourseWare has indeed been realized and MIT currently makes virtually all of its curricula available online free of charge. I am well aware of the impact it has on academia because I was a professor at Michigan Tech back in 2001 and my colleagues were wondering what would become of them if the renowned professors at MIT did all the teaching via internet. There was much awe and apprehension.

A similar quantum jump took place in Korea in 2004 when Korean government decided to service lectures free of charge for high school students preparing for college entrance examination via EBS, the educational broadcasting service akin to PBS in the US. The government went a step further, mandating 70% of all college entrance exam questions be extracted from the EBS lectures in an effort to curve the ever rising cost of supplementary education which is borne by parents privately. (What is called ‘private
education’ in Korea is quite different from the way West uses the term private versus public education. It is actually ‘supplementary education’ which is taken by students in addition to the regular schooling and is paid privately by the parents.) This decision was the case of government succumbing to the proverbial “if you can’t beat them, join them.” In a losing battle to control the runaway wagon that is the ‘private education’, the government decided to jump on the bandwagon and lead the way for ‘private education’ in airwaves and cyberspace.

Albeit limited to Korean public, the impact of this decision was huge, far more immediate and profound than the MIT declaration. For example, in Daejun, a major city with 61 high schools, a whopping 75% of the schools are using EBS online lectures in their senior classes in lieu of regular classes taught by ‘real’ teachers (national average was 47% in 2011). This statistic alone adequately shows the sheer magnitude of the impact of EBS online lectures on the nature of K-12 education in Korea. It also reveals the unintended and unforeseen side-effects of EBS online lectures, severely distorting the nature of high school education, sidelining the ‘regular’ teachers and ironically making the regular education supplementary to the ‘supplementary education’.

The EBS online (and broadcast) lecturers, who are often from the ‘private education’ sector, have become a sort of ‘star’ in the educational arena and a role model even for regular teachers in the public sector. But a great deal of EBS lectures is conducted in a traditional lecture style, teachers talking unilaterally and students listening passively. The lecturers do a great job of explaining difficult subject matters, but there is no room for student taking ownership for their learning. In one instance, a lecturer emphatically instructed students, “if you see this phrase in a paragraph, make sure you underline it. Just do it! No questions asked! Don’t even think about it!” It was the dumbest moment of the smart media in education. There is neither creativity nor humanity. That is, the poorest form of distance learning is rapidly becoming a model to emulate even in regular classrooms precisely at the moment when Korean government is pushing for innovation in K-12 education. It is another irony, indeed, that the most advanced form of media is reinforcing the worst form of teaching.

It seems no real change in EBS lectures can be expected anytime soon because there is so much revenue at stake. Although the lectures are free, the cost of textbooks accompanying the lectures is substantial. In one survey, high school students purchased
at least 30 textbooks for EBS lectures in a year. So much for the original goal of lowering the cost of ‘private education’. Having invested in textbooks, parents complain about teachers giving out too much homework, making it difficult for their kids to find time to do the ‘private education’. So much for the priorities. While differing opinions and statistics are available, even the survey that shows a decline in overall spending for ‘private education’ does not claim any numerical significance in the data. What is significant for sure is the sale of the textbooks is very lucrative and it would be hard for me to imagine EBS forgoing the revenue.

A bright shining moment

The Korean experience is not all gloomy. A 10-part EBS TV documentary series aired late in 2010 and made a TV history. The series won virtually all major awards a TV program can earn, a first ‘grand slam’ in the history of broadcasting in Korea. By popular demand from the viewers, the documentary reran several times even in the first season and a book based on the series was published in 2011, becoming an instant bestseller. The documentary was titled “What is School?”

“What is School?” It is a strange question, indeed. Most of us go to schools for more than a decade, but no adult ever asks this question. Going to schools is so natural and obvious that we forgot to ask such a simple question. We went to school, even if we disliked it, and we are now sending our children to school, even if they hate it, because… well, because it is important. Just as we know air is important to our being but no one consciously think about air on a daily basis, we know school is important but we don’t question its existence. Just like air in the meantime became polluted, so did the school, becoming progressively less meaningful to our success and happiness. In a survey conducted by OECD and WHO, Korean school children and teens are ranked at the bottom of the happiness index in the world for the fourth consecutive years. It was precisely at this critical moment, EBS asked the poignant question, “what is school?”

One part in the series called “Gee Whiz! What happened to my teacher?” became a must see for all school teachers and students in teacher preparation programs across the nation. It was a documentary of three specialists (one in pedagogy, one in human relationship and emotional coaching, and one in educational philosophy) mentoring five young teachers who found teaching stressful and difficult, even to the point of wanting
to quit altogether. Mentoring involved videotaping the teacher, her students, and the classroom. Multiple shots were synchronized and viewed simultaneously on a screen so that the reactions of students could be matched to the teacher’s each and every movements and spoken words in real time. It was an example of smart media employed in full force.

The documentary showed before and after of the mentoring process. It clearly showed how ineffective and despairing teachers became effective and happy. It showed how, consequently, unruly and problematic children became attentive and behaving in just few months, like magic. The nation saw the importance of teacher in children’s education in concrete terms. The documentary was moving, bringing tears of shame to many teachers who could identify themselves in five mentees in the documentary. It also brought tears of hope that they themselves could wish for the same good ending. In it, we saw a moment of humanism captured by high-technology and new possibilities being created for all to hope for.

The documentary has spurred ‘microteaching’ in which a real or mock teaching session was videotaped and later reviewed by colleagues or a consultant. To facilitate the process, the government has funded a national program to train classroom consultants and financed the cost of consultation. The teachers who are appointed as Master Teachers, an official grade that is recently created to promote the excellence in teaching, are charged with the responsibility of conducting the consultation. A national association of educational consulting was recently founded and had its inaugural symposium just last month (May 26, 2012). A simple TV documentary has initiated a profound change in education. That is the power of media.

**So, what is the role of smart media in education?**

I don’t know to what future the smart media is heading. Since I have witnessed the media technology, at least in hardware, become progressively more advanced and sophisticated throughout my life, what I know for certain is that smart media is going to be faster, finer, more powerful, more connected, more flexible more adaptable, and more adoptable. But becoming smarter, I am not sure. I have seen it both dumb and smart. I have seen smart media becoming destructive at the hands of mindless people and an ordinary media becoming brilliant with smart contents. I hope for smart media with
smart content.

I have seen my creations disappear without trace in a black hole called 'outdated data storage media'. I have invested much time learning a new medium with a payback that lasted only a few years. I have wasted much time tinkering with fancy media only because they were fancy, but without real purpose. So, a part of me remains reserved about the future of smart media. But, I also had a firsthand experience with the power of smart media. It in a way has made me who I am. It has given me an outlet for my creativity and expanded the limit of my reach beyond my imagination. So, another part of me is excited with the anticipation for the arrival of new smart media.

Smart media is not about what it produces but it is about a smart process, faithful to here and how, for the benefit of all. Whether the smart media in education going to be a blessing or a curse depends on what we do with it.