

Implications of Multitasking
for children and adolescents' learning and healthy development

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Susan Schilling - respondent

What must be explored?

The research to date seems to suggest we are not well wired to do much with multi tasking. But since we know multi tasking is a learned skill and we see that kids are using all sorts of tools to multi-task in all aspects of their lives other than schooling, then we must decide how to best utilize this trend/phenom/skill to maximum advantage.

The current antiquated US traditional system of education was developed to create an informed citizenry to continue the democracy, and to fill the needs of the industrialized society. What purpose does the education system need to serve today and what role do technology tools that promote multi-tasking play in fulfilling that purpose?

Having spent my entire career in the field of educational technology, I approach this topic from the perspective of a practitioner rather than a researcher.

In the service of gross over-simplification, I offer the following replay.

- In the early days of educational software, the emphasis was on exploring what you can do with the technology to make it useful for educators. Since the computer could count things well, the first explorations were in collecting data and then trying to see patterns. These combined computer assisted instruction/computer managed instructional environments were a system analyst's dream where the entire world could be codified, put into a scope and sequence and data gathered with true/false, multiple choice measures as to how much 'learning' was being accomplished. Federal research aided much of the R&D in this era. (CCC, PLATO system) Kids were interested at first and bored quickly but generally would rather do a series of multiple choice questions on the computer than with paper and pencil.
- Then, as capacities grew in the desktop world and Apple II gave way to Iie and the green screen was replaced by 4 color, the question became how to promote good instructional methods and materials (without invoking the 'gratuitous use of color') that could be equitably shared across the country and mitigate against poor teaching. More engaging methods were now possible on the screen and higher capacity software and hardware led to a whole new approach – edutainment, which was a little of both and a lot of neither. Federal dollars were no longer available to fund basic research, so these 'advances' were driven by mainly for-profit companies. (Broderbund, Learning Company MECC)

- Educational software tried to make its way into the consumer market place, but fell victim to the high cost of real estate. Software retailers could use the shelf space to sell entertainment for \$55 a box, or \$20 a box for education titles. The entertainment product had more turns on the shelf, so education and edutainment lost their point of distribution.
 - Some die-hard educational content providers continue to exist in the internet world; some advances in artificial intelligence keep certain products interesting if not effective. But the majority of the educational uses of technology moved away from content (which was now free on the internet) to tools. Content often seems to be moving from pure text to pure video...equally un-interactive.
 - Meanwhile, kids were finding the Playstations of the world most accessible, the gaming strategies most intriguing, the internet most inviting, and the whole process of social networking unavoidable. Cell phones that used to just make calls now can replace most libraries, movie theaters and television stations. Information (if not knowledge) is available when you need it wherever you are. Simple questions can be answered in a matter of seconds. You can be continually available to communicate with your peers, you can play your favorite music/movies/TV shows anytime, you can program most every aspect of your life to make it most convenient for you. Schedules imposed by TV stations, movie theaters, library hours no longer dictate access.
1. I wonder what this means to the school calendar and schedule. Why are school days and school years confined?
 2. I wonder how instructional methods and practices have to change to accommodate a world where you can google all the simple stuff. How do you engage students in relevant work that has deep levels of rigor so that they learn to go deeper and ask the unanswered questions rather than settle for the known.
 3. I wonder if multi tasking is a learned skill, and if so, how you provide the framework to allow for deep thought?
 4. I wonder what holds a society together and where the definitions of right and wrong will come from to determine right and wrong actions, i.e. is it right for a US student who hates censorship to aid in the fomenting of dissent in another county by using social networking tools simply because he can?
 5. I wonder how people learn to move beyond the tyranny of individual opinion in an internet blog world to the skill of working collaboratively, using all the tools available, to save the world?
 6. I wonder how you use the power of the technologies available to cause students to contribute and create knowledge rather than just consume information.