'Digital revolution,
or Digital revulsion?:
Or, from Google, to Gilson to
(Ancient) Greece

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Structure of presentation

✳ Short introduction:

    ✳ From techno-sycophant to techno-critic:

        ✳ ...fragments of a personal journey...

✳ Thinking about computers in education from a critical perspective means looking at:

    ✳ Pedagogical concerns;

    ✳ Ecological concerns;

    ✳ Social concerns;

    ✳ Health concerns.

✳ Looking to ancient Greece for words on 'wisdom':

    ✳ Well before being an economic basketcase, Greece set the philosophical foundation for much of Western civilisation.

Computers in a Personal/socio-historical context

✳ To start, let me offer a brief personal...overview:

✳ I started using computers in 1980:

✳ A Sharp programmable calculator;

✳ An original Osborne computer (luggable?);

✳ An Apple (perhaps a IIe) computer;

✳ An Apple Macintosh (512k model)...

✳ And many, many more to follow.

✳ I started using modem-to-modem dialup in 1982; and first used the internet in 1986.

✳ A quote that seems useful here is:

✳ 'There are only two kinds of computing technology: those that are obsolete and those have not yet been made.'

✳ I THINK this is attributed to Adam Osborne (founder of above-mentioned Osborne computer), but have not been able to locate any source of it on-line.

✳ So not everything can be found on-line...

Concerns about computers in education from a critical perpsective

✻ Pedagogical concerns:

　✻ Exploring teaching and learning...

✻ Ecological concerns:

　✻ Looking at issues requiring consideration...

✻ Social concerns:

　✻ Schooling is partly a socialising act...

✻ Health concerns...

　✻ Questions that should asked of computers with children...

Pedagogical concerns (1)

* Speaking as an educationalist, I feel it is important to ask key questions about computers in education and schooling. Others have likewise done so, and for a good while.

* In 1998, Jane Healy wrote:

    * 'Today's children are the subjects of a vast and optimistic experiment. It is well financed and enthusiastically supported by major corporations, the public at large, and government officials around the world. If it is successful, our youngsters' minds and lives will be enriched, society will benefit, and education will be permanently changed for the better. But there is no proof--or even convincing evidence-- that it will work.' (p. 18)

    * She suggests that computers in education have been driven by 'exaggerated hopes and unmet promises.' (p. 19)

Pedagogical concerns (2)

✳ Of prime concern, pedagogically, should be:

  ✳ Computers demand constant change and updating;

  ✳ Computers are restricted to highly specific ways of thinking;

  ✳ The internet is biased towards those specific ways of thinking;

  ✳ Neither the computers, nor the internet, can contribute to critical thinking about the use of computers and the internet...something that is sorely needed within education today.

✳ There are obviously many, many other concerns. But looking at this issues will lead us in a very different direction in considering the role of computers, and the internet, in education.

Ecological concerns (1)

* Here, concerns are, first, about computers as 'waste'; and, second, the natural resources used in making computers.

  * From the website of Camara Education (with the slogan 'Transforming Education') comes this quote:

    * '250,000 computers are scrapped each year in Ireland...' (from 13 September, 2011).

      * Perhaps we need to inquire how many computers were scrapped from Irish school each year?

  * More importantly, the typical computer is made from many components, including:

Ecological concerns (2)

✳ Plastics, lead, aluminium, germanium, gallium, iron, tin, copper, barium, nickel, zinc, tantalum, indium, vanadium, terbium, beryllium, gold, europium, titanium, ruthenium, cobalt, palladium, managanese, silver, antimony, bismuth, chromium, cadmium, selenium, niobium, yttrium, rhodium, platinum, mercury, arsenic, silica.

✳ Did YOU know this?

✳ The twin ecological concerns of waste, along with components used in the manufacture of computers, must force us to question their presence in schools.

Social concerns (1)

* Taking both pedagogical and ecological concerns into account, of course, includes a set of social issues. But there are also a set of specific social aspects of the use of computers, and the internet, in education that must be taken into account.

* Let's look briefly at:

    * Access and equality: the 'digital divide'?;

    * Social interactionism and 'cyber-bullying';

    * The 'addictive' nature of many technologies;

    * History of computer networks (the internet).

        * Briefly by looking at one point and one question...

Social concerns (2)

* Access and equality:

  * The 'tickle down economy' has not appeared to 'trickle down' much; why apply the same thinking to computing technology?

  * How many people (of over 7 billion alive today) have never used a computer or the internet?

* Social interactionism and 'cyberbulling':

  * The online world would seem to mirror the social world: has history taught us nothing in light of colonialism, imperialism, slavery, and, now, globalisation?

  * Cyberbulling is a current social trend online: can we simply look at that and suggest we are reliving our known social world in the electronic world?

* Technologies and addiction:

  * Once a technology is available at a broad social level, is it possible that complacency takes over and human users become addicted to such technologies?

  * How many here have seen people sitting, standing, walking side-by-side, each using personal technology devices, but not attending to the other person?

* History of computer networking and the internet:

  * Who are DARPA?

  * And why do I ask this in light of the internet?

Health concerns (1)

✳ Technologies are frequently 'offered' to societies as generally 'good' and positive. Are they? Says who?

✳ In relation to computers in education, one teacher union in the US offers this health concerns:

　✳ Cumulative Trauma Injuries (CTDs);

　✳ Back, neck and shoulder injuries;

　✳ Vision problems;

　✳ Radiation exposure.

　　✳ I have personally used computers for a long, long time...

✳ In May, 2011, the World Health Organisation/International Agency for Research on Cancer (IARC) released a study that suggested:

　✳ '...the WHO/IARC has classified radiofrequency electromagnetic fields as <u>possibly carcinogenic for humans</u>...based on an increased risk for <u>glioma</u>, a malignant type of brain cancer, associated with wireless phone use.' (Bold and underlined in original)

　　✳ Might the same hold true for all mobile computing technology?

Health concerns (2)

※ I want to stress that 'possibly' is contained in the WHO/IARC excerpt.

  ※ I, and most people in this room, use mobile phones, and other wireless forms of technology, quite frequently.

  ※ All I want to do is ask that we think about the possible/potential consequences when offering children in schools this same set of technologies.

※ Do we really KNOW computers do NOT pose possible/potential health problems with both young and old human beings?

  ※ If not, why are we insisting such technologies be in schools?

Back to the future?

* In conclusion, allow a short journey to the past...ancient Geece and a dialogue with Socrates (via Plato).

* Ancient Greece was an oral society, and contributed much of the philosophy underpinning our broad Western culture.

* Socratic thinking itself is one foundation for education, and pedagogy, in the Western world.

* When a proposal was made to introduce writing into Greek society, words were spoken that are helpful today.

From 'Phaedrus'...

✻ Plato has Socrates in dialogue with Phaedrus, and considering wisdom in relation to the proposed introduction of literacy into society.

✻ The king turns down the proposal saying:

  ✻ '...the discover of an art is not the best judge of the good or harm which will accrue to those who practice it...Those who acquire [writing] will cease to exercise their memory and become forgetful; they will rely on writing to bring things to their remembrance by external signs instead of on their own internal resources.

  ✻ What you have discovered is a receipt for recollection, not for memory. And as for wisdom, your pupils will have the reputation for it without the reality; they will receive a quantity of information without proper instruction and in consequence be thought very knowledgeable when they are for the most part quite ignorant.' (lines 273-286)

Conclusing questions...

- ✳ In education children today, do we dare ask ourselves to teach for wisdom?

- ✳ Can computers possibly contribute to such teaching of wisdom?

- ✳ In light of pedagogical, ecological, social and health concerns described here, why are computers used in schools at all?

  - ✳ It is important to ask again, and again, and again: what is the purpose of education?

  - ✳ If the purpose of education is NOT learning wisdom, what IS education for?