



# Digital Cultures in the New Age of Technology



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He has written 86 articles, has published the book E-Learning Educational Technology.

Teaches at various faculties in post graduate, he has participated as a guest on national and international congresses.



DIGITAL CULTURES IN THE  
NEW AGE OF TECHNOLOGY

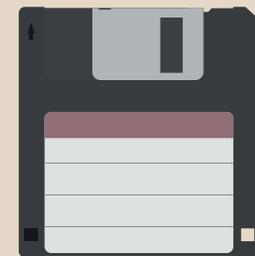
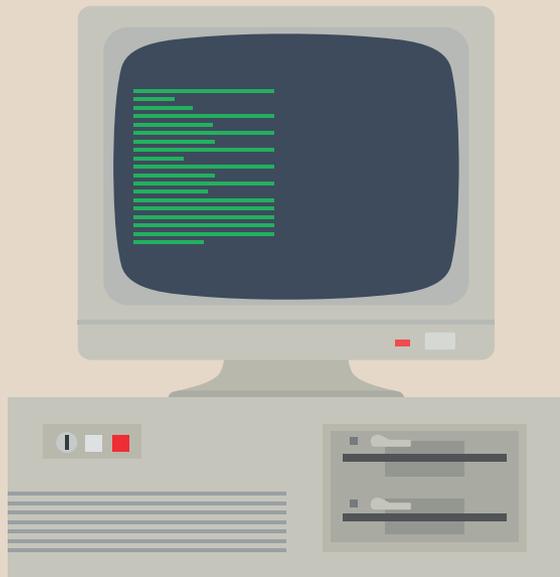
**KEYNOTE SPEAKER**

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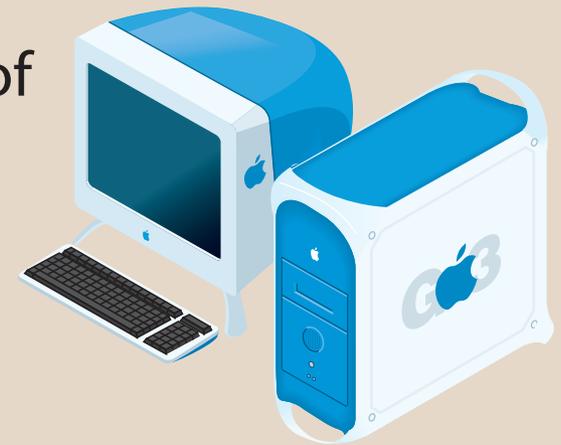
# In the Beginning

- The first computers began to appear in NSW High School classrooms around 1979
- It was in the Maths room



# In the Beginning

- ICT had begun to be slowly taken up in schools throughout the 1980's
- Until early 90's Apple ruled supreme in schools
- The growing phenomena being the Internet and WWW pressured the advent of new productivity
- Research to guide best practices has yet to be developed



# In the Beginning

- Schools in NSW all have Internet connectivity in 1996
- The early days of Internet saw schools and other education facilities develop websites
- These were merely an information service – users unable to “interact” with sites

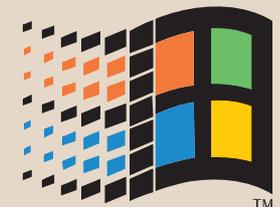


# In the Beginning

- High schools begin to introduce Windows 95 PC's, Apple was more expensive declining in popularity with schools
- 1997 saw NSW schools start receive the first official government roll out of PC's
- 1 for every 12 students



Authorized Dealer



MICROSOFT<sup>®</sup>

WINDOWS<sup>™</sup> 95



# Internet and WWW maturing

- 2001 other services begin to emerge



- Wikipedia, Google, MySpace, Facebook, Digg, Twitter...

- Known as Software as a Service (SaaS) applications



- SaaS removes the need for desktop productivity suites

- Such as Word, Excel and Power Point



# WEB 2.0 changes everything

- WWW was moving towards a read/write platform  
Allowing for “interactivity”
- User could now engage with others
- Contribute and publish information such as graphics, animation, audio and video



# WEB 2.0 changes everything

- Computer now a productivity and communication network tool
- Web 2.0 effect on education focus of development and research
- Web 2.0 becoming common place in education requires that there be research



# Digital Education Revolution

- 2008 Australian government announce plan
- Every student from Year 9-12 to have access to individual computer
- 2012 this goal is achieved
- Lenovo laptops available for all these students



# Importance of Teacher Education

- Schools must no longer simply teach computer skills
- Digital technology must be embedded in the process of education
- Improve educational opportunities
- Boost outcomes, energise learning experiences



# Importance of Teacher Education

- Professional development for teachers needs to be provided in order for teachers to be able to deliver suitable educational outcomes through embedding technological practices within current pedagogy. (Buchanan 2011)



# Importance of Teacher Education

- The educational landscape has transformed
- Notions of literacy, knowledge and communication has been altered by digital technologies
- Educational practices have to change to accommodate the new learning styles preferred by this “Digital Native” generation
- Students need freedom to be able to create own digital culture and identities



# Digital Culture and Education

- Host of new tools that can be utilised in education  
Google Maps, Google Earth, Google Apps, Google docs, Google Scholar, Google books
- YouTube, Flickr, Blogs, Wikis
- Social networking (Facebook, MySpace)
- Blackboard, Moodle, (interactive learning platforms)



# Digital Culture and Education

- Different types of learning (eLearning)
- Interactive classroom
- Independent and Networked learning
- Learning organisations



# Digital Culture and Education Tertiary

- Distance education has been around the World as long as we have had a postal service!
- University of Queensland offered first course by correspondence in 1911
- Digital technologies has vastly changed our attitudes and opportunities in obtaining education by distance (online)



# Digital Culture and Education Tertiary

- Students can now take advantage of available technologies for flexible options in meeting their educational needs
- Universities gives access to hundreds of people to offering online study options.

ICT to



# Digital Culture and Education Industry

Industries can provide online training to further worker's knowledge and skills



# Digital Culture and Education Self-Directed, Peer based learning

Freedom and autonomy available that is less apparent in a classroom setting

More motivated to learn from peers

Outcomes emerge through exploration, (in contrast to classroom learning that has set predefined goals)

Social and technological skills are enhanced by social media and can be utilised for learning



# Digital Culture and Education Self-Directed, Peer based learning

Research conducted independently and alternatively of formal instruction

Desire to source knowledge out of curiosity or interest is made easy via Internet

Thanks to vast tools and communities available such as Google, Wikipedia, LiveJournal, DeviantArt to name a miniscule few



## **ICT impact is dependent upon the type of pedagogies used**

Transmission-type teacher-centred pedagogies are sometimes seen as more efficient than more 'constructivist' student-centred pedagogical styles, likely because their level of effectiveness may be more easily measured. Conversely, the use of ICT for teaching and learning is seen to be most effective when employed as part of a student-centred approach, which by nature is more difficult to measure.



## ICTs motivate both teachers and students

There appears to be some consensus that both teachers and students feel ICT use greatly contributes to student motivation for and engagement in learning.

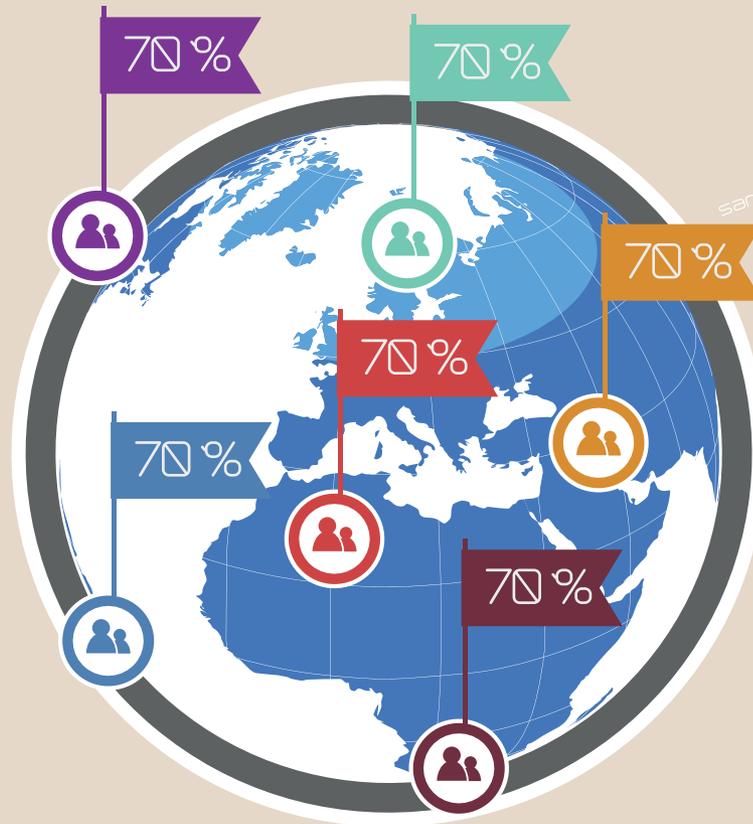
“A very high 86% of teachers in Europe state that pupils are more motivated and attentive when computers and the Internet are used in class... ICT has a strong motivational effect and positive effects on behaviour, communication and process skills.” (Balanskat, 2006)



# Digital Culture and Education

## Digital Culture

Digital Culture is enriched, enhanced and influenced from education



Education is enriched, enhanced and influenced by digital culture

## Education



# Technological Pedagogical Content Knowledge

- While **ICT** is becoming prevalent in schools, and children are increasingly growing up with ICT, teachers' use of
- ICT for teaching and learning continue to be a concern for educators (Jimoyiannis, 2010; Polly, Mims, Shepherd, & Inan, 2010). Integrating ICT into classroom teaching and learning continue to be a challenging tasks for many teachers (Shafer, 2008; So & Kim, 2009). Teachers feel inadequately prepared for subject-specific use of ICT and robust theoretical framework is lacking (Brush & Saye, 2009; Kramarski & Michalsky, 2010). To address the challenges, an important theoretical framework that has emerged recently to guide research in teachers' use of ICT is the technological pedagogical content knowledge (**TPACK**).



thank you...



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