

ICTs and the Teacher for Tonga

EDG14 Developing Learning Resources
Graduate Certificate in Teaching
Tonga Institute of Education

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Oct 10th 2012

Objectives

- Explain what ICT is
- Appreciate the 'changing' meaning of ICT
- Explain why ICT is important to the Teacher for Tonga
- Explain what Web 2.0 is
- Describe how Web 2.0 tools have the potentials to improve learning resources
- Aware of Tonga Education's position in regard to using ICT in teaching

What is ICT?

ICT:

- **Information** and **communication technology**.
- A **variety** of technologies used to create, communicate, and manage information.
 - resources, machines, programs
- Meaning change with time

It's nothing new!

Slate

Pencil

Chalk

OHP +
Transparencies
Digital camera
iPod Media-players
Computers Web1.0
iPad + Internet Web2.0
Mobile-phone

Radio

Telephone

TV

OHP markers

Blackboard

Whiteboard

Paper

Ball-pen

ICT has the potential to improve quality of Tonga education by:

1. Improving **access**

⇒ **Asynchronous** learning/teaching

- Can learn anytime, anywhere

⇒ Learning resources –

- Available 24/7
- Diversity (print, audio, video)
- Quality (and quantity)

2. Improve **flexibility**

⇒ Asynchronous learning – Discussion forum etc

⇒ Synchronous learning – Chat, Webinar, Skype

3. Improve **relevance** of curriculum:

- Promote learner independence; self-directed learning
- Promote collaboration, sharing.
- Learners become better prepared for the work-place

ICT is believed to have the potential to improve the quality of education by:

4. Improving **motivation**

⇒ Appealing – texts, sounds, colours, movements

⇒ Learner wants to learn; interest – intrinsic motivation

5. Promoting **creativity**

⇒ old things done in new ways

⇒ new things done in new ways

ICT is believed to have the potential to improve the quality of education by:

4. Transforming **practice, perceptions**

⇒ learning environment

⇒ pedagogy and content

5. Improving **Teacher education**

⇒ e.g. Cyber Teacher Training Centre (CCTC) South Korea

Knowledge of ICT in curriculum for long-term development

6. Access to ICTs in schools is critical **for development**

- In developing countries, Access at home to ICT is low . E.g. Internet access 13.5% developing countries : 65% in developed countries)
- ICTs knowledge and skills drive growth and productivity
- Long-term economic competitiveness
- Acknowledged by Pacific Islands Forum, FEdMMs

What Pacific Islands (including Tonga) Say About ICT?

1. **100% Agree** ICT beneficial to PI students
(Pacific e-learning Observatory)
2. **The Tonga Declaration (June, 2010)** : Pacific Islands ICT Ministers declared that we:

1. Are committed to using ICT as a key tool for the development, governance and sustainable livelihood of the people of our countries;
2. Recognise that while ICTs have enormous potential for socio-economic development, they pose risks to our communities that need to be carefully managed;
3. Will work together to support the advancement of Pacific countries through improved deployment and use of ICTs in our societies; and
4. Endorse the concept of 'many partners, one team' in progressing a more coordinated and coherent approach to ICT development.

Forum Education Ministers Meeting (FEdMM), PNG, Oct 2010

Ministers are **invited** to:

- (a) **note** and accept the importance of ICT in Education in schools, tertiary institutions and the community;
- (b) **endorse** that a Working Group comprising regional and identified national representatives be established to work on a regional strategy in ICT in Education; and the group to be led by USP;
- (c) **note** that the strategy be holistic and aligned to the Framework for Action on ICT for Development in the Pacific and the PEDF; and
- (d) **support** appropriate trials of ICT in Education with sound measurement and evaluation to inform the Working Group.

Forum Education Ministers Meeting (FEdMM), Port Vila Vanuatu, May 2012

- *Regional Framework for ICT in Education in the Pacific*
 - Submitted by ICT Working Group (USP/SPC)
 - A response to FEdMM 2010 request for regional guidelines for ICT in education
 - Highlighted:
 - ICT an essential part of Pacific Island society
 - ICT to enable flexible and student-centred learning
 - To influence social development
 - **ENDORSED** by FEdMM

What is Tonga education's position regard to ICT in Teacher Ed?

PRIORITY!

TOP PRIORITIES FOR 2012-2015

1. Development of core modules for ICT teacher education to be delivered to untrained graduate teachers in the outer islands and in the main district areas, using online resources.
2. Training of teachers to develop supportive online materials at various higher education levels.
3. Provision of ongoing capacity building workshops to upskill teachers to use ICT in the teaching and learning processes.
4. Creating a new physical infrastructure in Tonga Institute of Higher Educaiton that can provide ongoing technical support to train teachers to use ICT and the delivery of TVET curriculum programmes ie creative technology in the primary level and design technology at the post-secondary level.

Source: Heimuli, P. (2011). Kingdom of Tonga: Focal point. A country report. Available at: www.col.org/SiteCollectionDocuments/.../CP_TONGA_2011.pdf

1. "... there is a great need to include the development of an ICT teacher competency in the Tonga Institute of Education and Higher Education .”
2. "... to develop the ICT manuals to be used by teacher educators as well as teachers in Tonga. Ongoing support is very much needed to carry out capacity building workshops for teachers in Tonga on ICT .”

Source: Heimuli, P. (2011). Kingdom of Tonga: Focal point. A country report.
Available at: www.col.org/SiteCollectionDocuments/.../CP_TONGA_2011.pdf

Our Challenges to ICT integration in Education

- Connectedness
 - Low bandwidth (connection speed/traffic)
 - Vast distances between remote islands, communities
 - Connectedness **costly**
- Small commercial markets
 - limited **spending** potentials
 - Not attractive to investment

(PacificIT.org, 2006-2007)

But!

Table 2. Top challenges for educational ICT development

1. Lack of adequate financing
2. Lack of skilled personnel
3. Poor access to infrastructure and ICT equipment
4. Low awareness about the benefits of ICT
5. Ineffective secondary infrastructures such as electricity, roads and related services
6. Low connectivity speeds and inadequate networks
7. Difficulties in maintaining and repairing broken equipment
8. Lack of integration of ICT into the curriculum and outdated curricula
9. Lack of 'ICT culture'
10. Lack of trust and suspiciousness about ICT

(Whelan, 2007)

WORLD INTERNET USAGE 2010

WORLD INTERNET USAGE AND POPULATION STATISTICS						
World Regions	Population (2010 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data	Penetration (% Population)	Growth 2000-2010	Users % of Table
Africa	1,013,779,050	4,514,400	110,931,700	10.9 %	2,357.3 %	5.6 %
Asia	3,834,792,852	114,304,000	825,094,396	21.5 %	621.8 %	42.0 %
Europe	813,319,511	105,096,093	475,069,448	58.4 %	352.0 %	24.2 %
Middle East	212,336,924	3,284,800	63,240,946	29.8 %	1,825.3 %	3.2 %
North America	344,124,450	108,096,800	266,224,500	77.4 %	146.3 %	13.5 %
Latin America/Caribbean	592,556,972	18,068,919	204,689,836	34.5 %	1,032.8 %	10.4 %
Oceania / Australia	34,700,201	7,620,480	21,263,990	61.3 %	179.0 %	1.1 %
WORLD TOTAL	6,845,609,960	360,985,492	1,966,514,816	28.7 %	444.8 %	100.0 %

(Source: Internet World Statistics: <http://www.internetworldstats.com/>)

WORLD INTERNET USAGE 2012

WORLD INTERNET USAGE AND POPULATION STATISTICS December 31, 2011						
World Regions	Population (2011 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data	Penetration (% Population)	Growth 2000-2011	Users % of Table
<u>Africa</u>	1,037,524,058	4,514,400	139,875,742	13.5 %	2,988.4 %	6.2 %
<u>Asia</u>	3,879,740,877	114,304,000	1,016,799,076	26.2 %	789.6 %	44.8 %
<u>Europe</u>	816,426,346	105,096,093	500,723,686	61.3 %	376.4 %	22.1 %
<u>Middle East</u>	216,258,843	3,284,800	77,020,995	35.6 %	2,244.8 %	3.4 %
<u>North America</u>	347,394,870	108,096,800	273,067,446	78.6 %	152.6 %	12.0 %
<u>Latin America / Carib.</u>	597,283,165	18,068,919	235,819,740	39.5 %	1,205.1 %	10.4 %
<u>Oceania / Australia</u>	35,426,995	7,620,480	23,927,457	67.5 %	214.0 %	1.1 %
<u>WORLD TOTAL</u>	6,930,055,154	360,985,492	2,267,233,742	32.7 %	528.1 %	100.0 %

(Source: Internet World Statistics: <http://www.internetworldstats.com/>)

We're seemed to be doing fine

Without NZ and Australia

Internet Usage and Population Statistics for Oceania						
<u>OCEANIA</u>	Population (2011 Est.)	% Pop. Oceania	Internet Usage, 31-Dec-11	% Population (Penetration)	User Growth (2000-2011)	% Users Region
<u>American Samoa</u>	67,242	0.2 %	3,040	4.5 %	n/a	0.0 %
<u>Australia</u>	21,766,711	61.4 %	19,554,832	89.8 %	196.3 %	81.7 %
<u>Cook Islands</u>	11,124	0.0 %	6,000	53.9 %	n/a	0.0 %
<u>Fiji</u>	883,125	2.7 %	162,880	18.4 %	2,071.7 %	0.7 %
<u>Kiribati</u>	100,743	0.3 %	8,959	8.9 %	795.9 %	0.0 %
<u>Marshall Islands</u>	67,182	0.2 %	6,540	9.7 %	1,208.0 %	0.0 %
<u>Micronesia</u>	106,836	0.3 %	22,213	20.8 %	1,010.7 %	0.1 %
<u>Nauru</u>	9,322	0.0 %	340	3.6 %	0.0 %	0.0 %
<u>New Caledonia</u>	256,275	0.7 %	87,420	34.1 %	264.3 %	0.4 %
<u>New Zealand</u>	4,290,347	12.1 %	3,625,553	84.5 %	336.8 %	15.2 %
<u>Niue</u>	1,311	0.0 %	1,100	83.9 %	144.4 %	0.0 %
<u>Papau New Guinea</u>	6,187,591	17.1 %	125,000	2.0 %	0 % %	0.6 %
<u>Samoa</u>	193,161	0.5 %	12,816	6.6 %	2,463.2 %	0.1 %
<u>Solomon Islands</u>	571,890	1.6 %	26,907	4.7 %	1,245.4 %	0.1 %
<u>Tokelau</u>	1,384	0.0 %	800	57.8%	1,112.1 %	0.0 %
<u>Tonga</u>	105,916	0.3 %	12,487	11.8 %	1,148.7 %	0.1 %
<u>Tuvalu</u>	10,544	0.0 %	4,300	40.8 %	0.0 %	0.0 %
<u>Vanuatu</u>	224,564	0.6 %	19,172	8.5 %	539.1 %	0.1 %

Web 2.0 in the classroom

Today, ICT in
the classroom is
about **Web 2.0**

Web 2.0? What is it?

Meaning is broad, therefore vague.

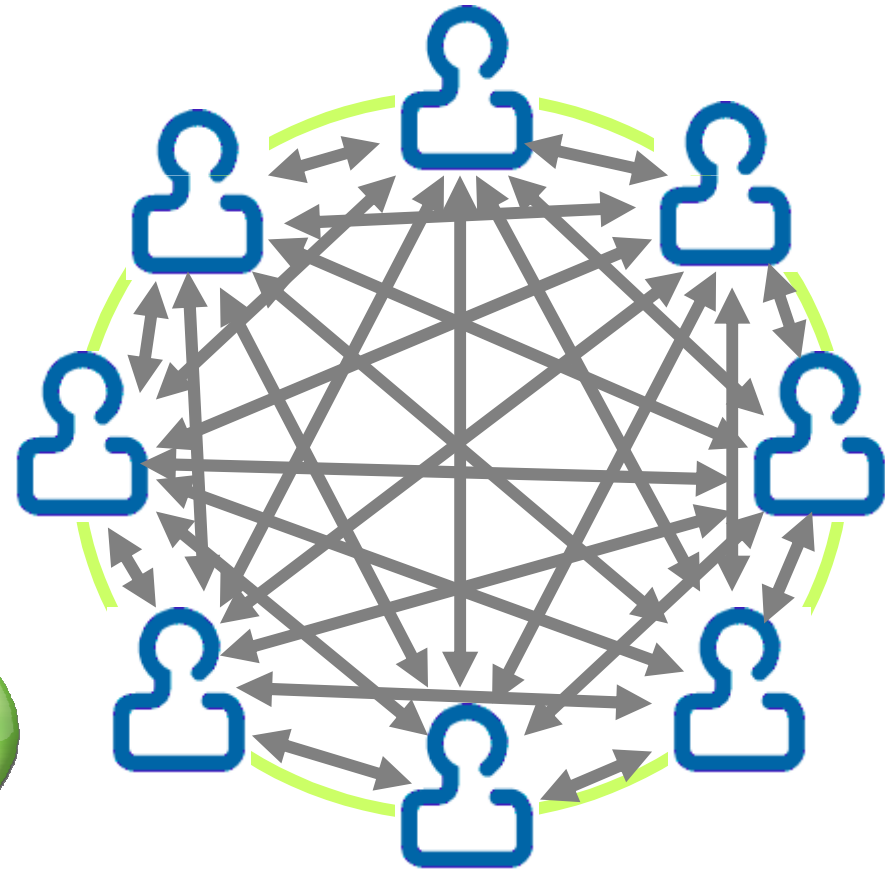
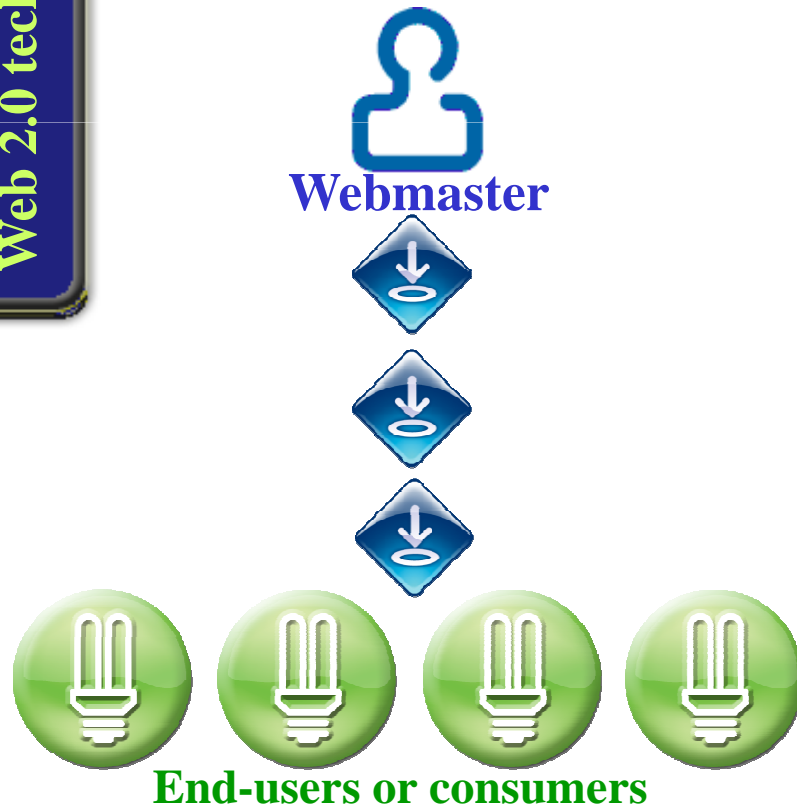
But it represents:

1. A **Turning point** – a **Renaissance** for the web (O'Reilly, 2009)

Web 1.0 $\Rightarrow \Rightarrow \Rightarrow$ Web 2.0

2. A philosophy regarding how we use the web to learn:

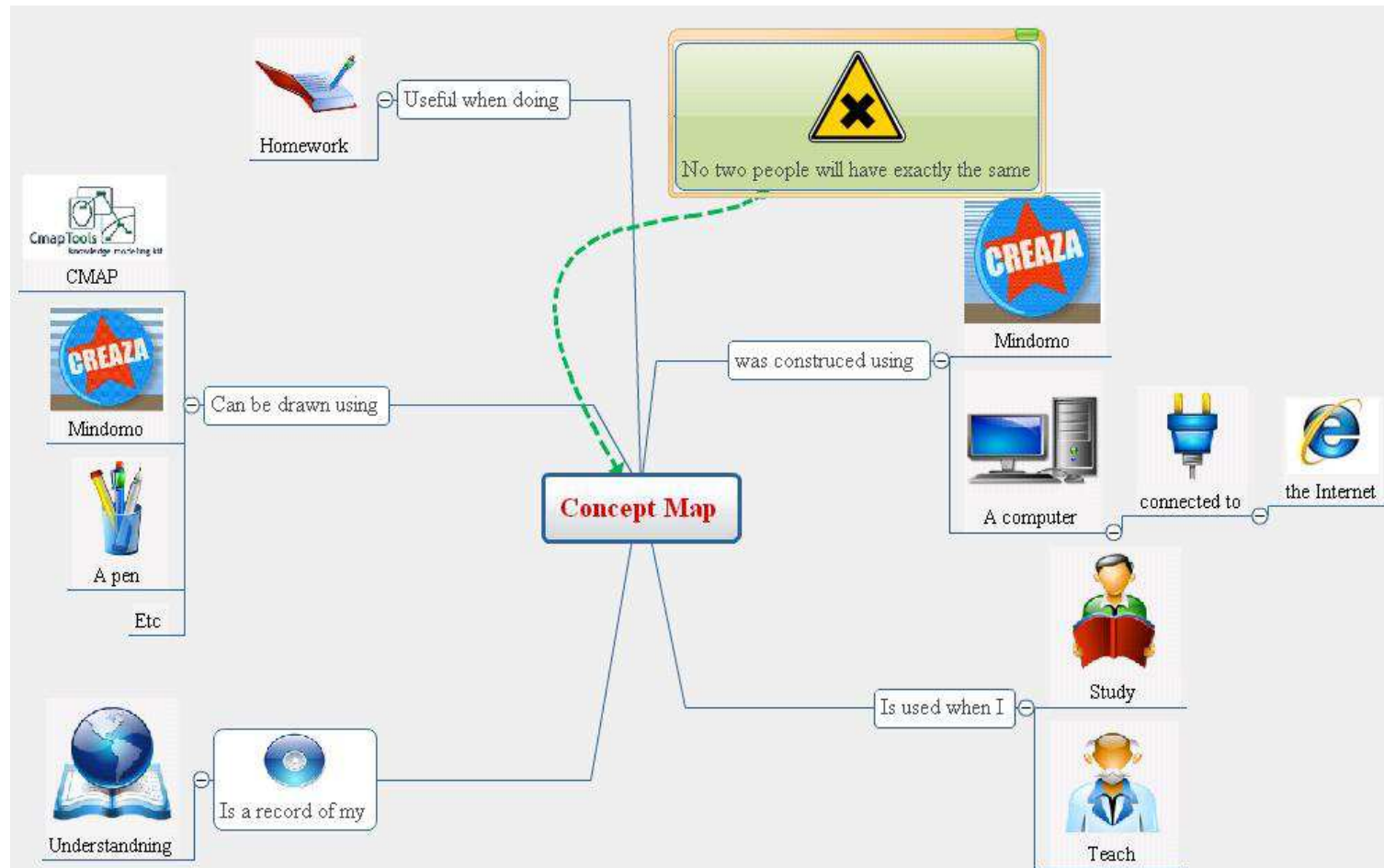
- **Web 1.0** – we are consumers of Internet data; we passively absorb what's available. Webmasters (companies) own data.
- **Web 2.0** - we are (or should be) active contributors, helping customize media and technology for our own purposes (TechSoup, 2005).



- A group of **Web Applications**
 - E.g. Weblogs (blogs), FaceBook, Twitter, Flickr, YouTube, Edmoto, Webquests, Diigo, Youblisher, Engrade, Wikis, RSS-Feed, ...etc, etc, etc – there are hundreds of these.

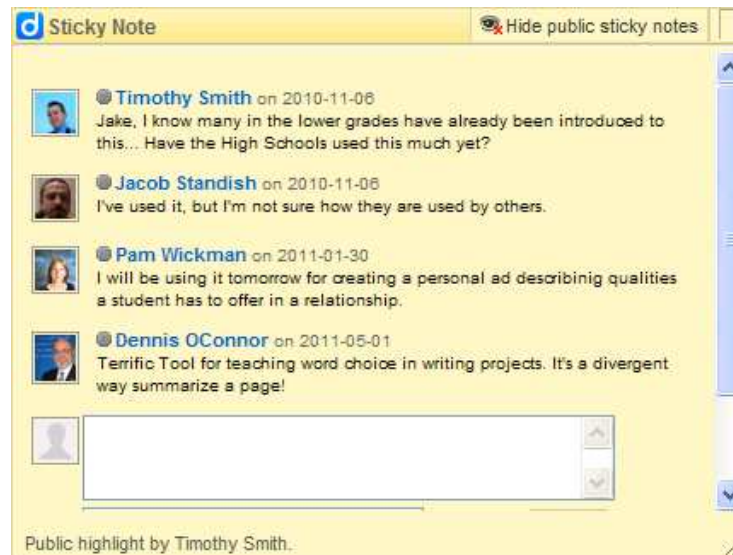
Concept mapping tools

You create concept maps, share them with others, embed using code provided.



Book-marking tools

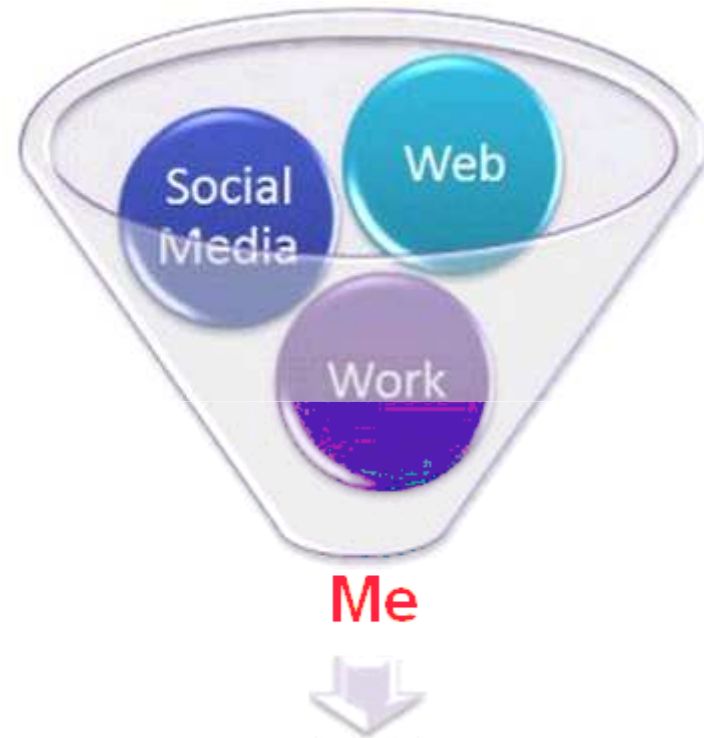
You bookmark websites, add sticky-notes, share with your network. E.g. **Diigo**, **Delicious**



Filters and Aggregators



RSS Feeds



Classroom or
class website

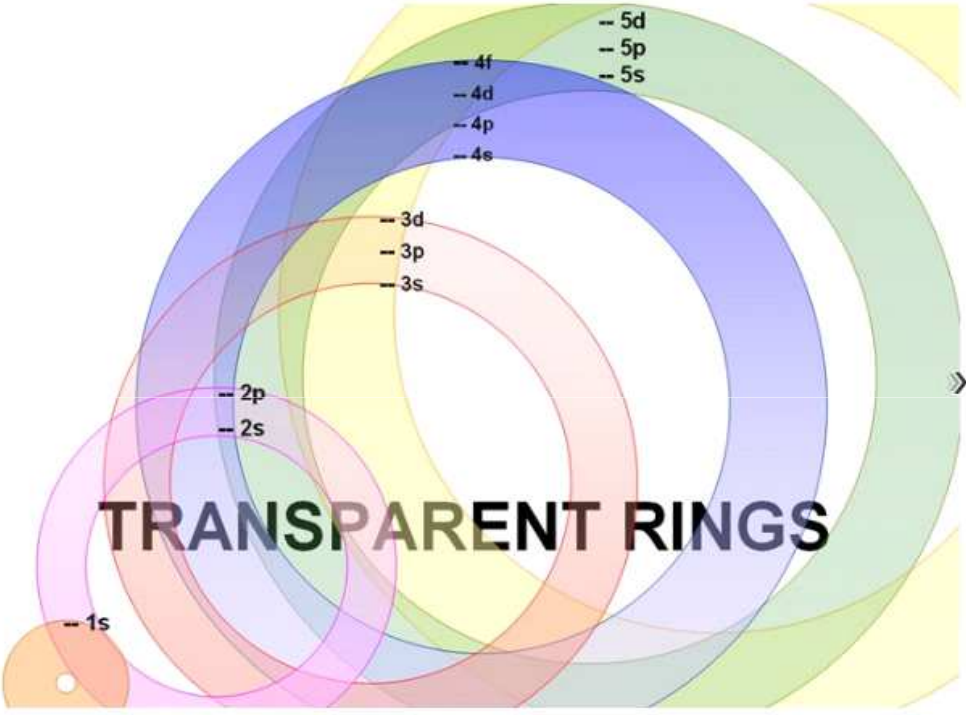
Tools for Presentation (Prezi.com) + Word clouds (Wordle.net)

The screenshot shows a Prezi presentation interface. At the top left is the Prezi logo. Navigation tabs include 'Your prezis', 'Learn', and 'Explore'. A search bar is located at the top right. The presentation title is 'Welcome ED250' with an 'Edit title' link. The author is 'Vilimaka Foliaki' and the date is '22 February 2011'. The main content is a word cloud on a black background with the following words: ED250, Welcome, planning-to-teach, reflective-practice, classroom, knowledge, attitudes, connectivism, teaching, learning, learning, students, skills, constructivism, and workbooks. On the right side, there are icons for 'Edit prezi', 'Save a copy', 'Download', and 'Delete'. At the bottom, there are navigation arrows, a 'More' button, and social sharing options: '0 likes', 'Get link or share' (with Facebook, Twitter, and Email icons), and 'Embed'.

Slideshare (Authorstream.com)

TRAM Slideshow2

Download: [Icons] Post to: [Twitter] [Facebook] [WordPress] [LinkedIn] [More] Share [Email] [Flag] [Favs] [Channels]



TRANSPARENT RINGS

Like Be the first of your friends to like this.

StoneB Fiji
Followers: 0 Start Following

Embed URL Thumbnail

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<div><h3 style="padding: 0px; margin: 3px;"><a href="htt
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Better than Primavera
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(<http://www.authorstream.com/Presentation/StoneB-436108-tram-slideshow2/>)

Blogging (e.g. WordPress.com)

The screenshot shows a WordPress blog post on 'Cruiselyna's Blog'. The header features the blog title and tagline 'Exploring online learning environments' over a background of pink flowers. A search bar is visible on the right. The navigation menu includes 'HOME', 'ABOUT CRUISELYNA', 'INDEPENDENT THINKING AND CONTEXT', 'POSTS', and 'COMMENTS'. Below the menu, there are category tags for 'PERSONAL LEARNING ENVIRONMENTS' and 'UNCATEGORIZED'. The main content area shows a post titled 'Guide to web-based tools' dated 'MARCH 10, 2011' by 'VILIMAKA ON CRUISELYNA'. The post includes a star rating and a 'Rate This' button. The text of the post describes an e-book 'Tools for the 21st Century Teacher' by Michael Zimmer. An image of the e-book cover is shown, featuring a word cloud with terms like '21ST-CENTURY', 'TEACHER', and 'TOOLS'. On the right side, there is an 'Authors' section with a profile picture of Vilimaka and a 'FOLLOW ME ON twitter' button. Below that is a 'Meta' section with links for 'Register', 'Log in', 'Entries RSS', and 'Comments RSS'.

<http://cruiselyna.wordpress.com/2011/03/10/guide-to-web-based-tools/>

Self-Publishing (Issuu, Youblisher, Bookr)

School of Education
The University of the South Pacific
TEACHING OBSERVATION FORM

Student's details (To be filled in by lesson observer)

Name of student: _____ Programme of study: _____
 Lesson/subject being observed: _____ Level taught: _____
 Starting time of lesson: _____ Duration of lesson: _____
 Name of school: _____ Date: _____
 Name of Associate Teacher: _____ Name of observer: _____

Interpretation of Grades		Assessed skills and knowledge
Grade	Description	
Highest	5 Student exceeds expectation	Overall planning
↑	4 Student meets expectation	Content knowledge
↑	3 Student approaches expectation	Lesson implementation
↑	2 Student develops expectation	Communication
Lowest	1 Student lacks aspects of good teaching	Classroom management
		Assessment

Note: Associate Teachers and SOE advisors are requested to complete at least two lesson observations for each of the two teaching subjects of the student teacher.

TEACHING OBSERVATION FORM

SCHOOL OF EDUCATION, USP

<http://www.youblisher.com/p/105454-Teacher-Observation-Form/>

Photo-hosting and sharing (Flickr.com)

The screenshot shows the Flickr.com interface. At the top, the Flickr logo is displayed with the text "from YAHOO!". Navigation links include "Home", "The Tour", "Sign Up", "Explore", and "Upload". A search bar is visible on the right with the text "You aren't sig". Below the navigation is a toolbar with "Favorite", "Actions", and social media icons for email, Facebook, and Twitter. A "Prev" and "Next" navigation bar is also present. The main image is a sunset over a beach with palm trees. To the right of the image, the photo is attributed to "VMFoliaki" with the note "No real name given + Add Cor". Below this, a caption reads: "This photo was taken on January Suva, Central, FJ, using an Olymp". A map shows the location "Suva" with a red pin. Below the map, it says "©Yahoo!2010, ©N" and "215 views". Further down, it states "This photo belongs to" followed by a link to "VMFoliaki's photostream". Below that, it says "This photo also appears in" followed by a link to "Fiji Sunset (set: 7)". A "first photo" link with a right arrow is shown next to two small thumbnail images of the sunset. At the bottom right, there is a placeholder for an "Advertisement".

Video hosting and sharing (YouTube, TeacherTube, Vimeo).

YouTube

Search

Bro

Science Microteaching Mr Toad's Story.wmv

ViliMakaF

6 videos



Subscribe



0:34 / 1:11

360p



WEB 2.0 Landscape

WEB APPLICATION

Widget/
component



Aggregation/
recombination



CONTENT
SHARING



RECOMMENDATIONS/
FILTERING



Rating/
Tagging

Collaborative
filtering

SOCIAL NETWORK



www.futureexploration.net

Note: Each of these Web 2.0 applications has multiple functionality - for each service the primary positioning has been used

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Web 2.0 Applications (or Tools)

- These help to cater for limitations of desktop applications.

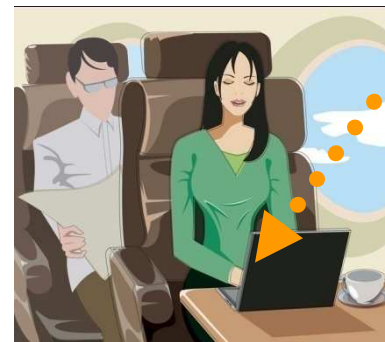
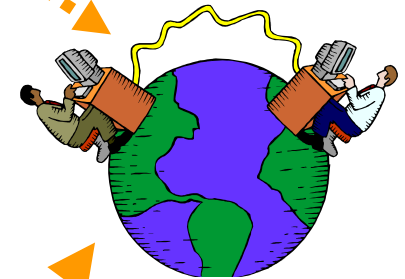


- Your workstation at School/Home.
- Your classroom at school



Your workstation

You work while on the move!



Travelling

Web 2.0 Applications

- Change the web >> “Participatory-web”
 - Encourage participation & collaboration – in social media dialogue
- Encourage a culture of sharing.
- There is **collective intelligence** from synergy of collaboration. E.g. Wikipedia
- Democratic - Openness and Freedom

Why Web 2.0 Applications in the classroom

- Your students –
 - born after 1985, PC computer increasingly available
- Many are impacted by digital technology “Digital Natives”
 - (e.g. PC, Internet, mobile phones, Computer games, portable media players – mp3s, Ipods.
- Net Generation – were born in the internet age
- **Our existing education system was NOT designed for this new generation – your students!**

Digital Natives

- Rarely enter a library
- Rarely use the traditional encyclopedia;
Use Wikipedia instead
- Use the Internet, SEARCH engines
(Google, Yahoo, etc).
- Converse using:
 - SMS - texting
 - Social networking - Face Book, MySpace,
Twitter etc.
- **Short Attention span**
- They are **CONNECTED 24/7!**

By their 21st Birthday

- They would have:
 - Spent 10,000 hrs Video games
 - Sent more than 200,000 emails
 - Watched 20,000 hrs TV
 - Watched more than 400,000 TV Ads
 - Spent **only** 5,000 hrs reading books!



(Marc Prensky, 2001)

“Digital Natives” think differently!

- Children raised with the computer —Think differently.
- Do they have short attention span?
 - To Digital Immigrants (i.e. Many of us), they have “Short Attention Span” or ADD.
 - Attention isn’t short when they are interested in the task (computer game, etc)
 - They need **INTERACTIVITY** – **immediate response** (from teacher, friends, etc)
 - They choose NOT to be attentive. **They are not interested**. The traditional lesson **IS NOT** stimulating enough!

Use Web 2.0 Tools in teaching!

- They are part of your students' world!
- They **appeal** more to students of today!
- They are social >>> they are **interactive**
- They are **free** (or becoming increasingly affordable)
- They **expand the boundaries** of your classroom >>> address diversity of learning styles/needs.
- They make teaching/learning more **flexible**
- They improve effectiveness of teaching/learning.

Malo

Follow me: @VL_YMK

twitter



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