

E-Learn

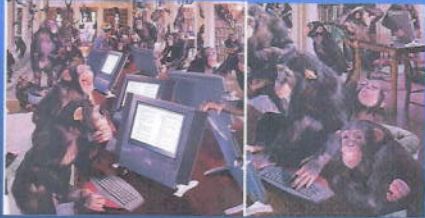
What Technology Tools Promote such Extreme Learning?

Analysis of Technologies Used in Extreme Learning Websites

E-Learn 2011, Hawaii

Eulho Jung, Indiana University
 Minkyong Kim, Indiana University
 Yurong Wang, Indiana University
 Curtis Bank, Indiana University
 cjbank@indiana.edu


Extreme Forms of Learning




Extreme learning?

We are living in an age of open education where anyone can now learn anything from anyone else at any time (Bank, 2009)

- Informal and non-traditional learning exploring how people learn or teach with technology outside of traditional educational settings
- Today, there is much educational hope and opportunity on the Web to personalize and individualize learning on a moment-to-moment basis



Free Virtual Learning (e.g., Free Rice)




TED: Technology, Entertainment and Design



GETideas Channel, Cisco (Education Thought Leader Series uploaded to YouTube)

<http://www.youtube.com/user/GETideas9g/g>



Citizen Generated News

Inside a Massachusetts stash house, p
Dispatches from the Field

"Sex, Lies & Cigarettes": Vanguard Trailer

News Timeline Portals (e.g., Arab spring: an interactive timeline of Middle East protests, The Guardian, Garry Blight, and Sheila Pulham, July 12, 2011)

<http://www.guardian.co.uk/world/2011/jul/12/interactive-arab-spring-timeline>

Online Database Activities (e.g., WolframAlpha) <http://www.wolframalpha.com/>

Online Mentoring (e.g., South African teens get virtual mentoring from all over the world, By Danielle Berger, CNN, January 14, 2011)

<http://www.cnn.com/2011/01/14/09/01/11/01/cnn.com/entw/teens.01.14.11>

Environmental Education (e.g., The Last Ocean Project, Ice Stories, and Shark Theater (24 foot inflatable screen (and outdoor ocean theater))

Live Science

OpenCourseWare (e.g., MIT Highlights for High School)

This slide features a collage of educational resources. At the top left is a screenshot of the MIT OpenCourseWare website with the heading 'MIT OpenCourseWare Highlights for High School'. To its right is a small video frame showing a man in a blue shirt. Below these are more screenshots, including one with the 'MIT WORLD' logo and another showing a man in a white shirt speaking.

Extreme Forms of Teaching

e.g., History for Music Lovers

The French Revolution ("Bad Romance" by Lady Gaga)
 Trojan War ("Tainted Love" by Soft Cell)
 Charlemagne ("Call Me" by Blondie)

<http://www.youtube.com/watch?v=9wv01111111>

This slide displays a collage of YouTube video thumbnails. The central and largest thumbnail shows a person playing a guitar. Other smaller thumbnails show various scenes, including what appears to be a historical setting and a person in a white coat.

Extreme learning?

- A wide range of disciplines:
 1. Adventure Learning and environmental education,
 2. Virtual Education (formal as well as informal),
 3. Social Change and Global Learning, and
 4. Language Learning.

Extreme learning?

- Extreme learning can involve learning while on a boat at sea near the North Pole or when sailing around the world. It also occurs when tracking the blog and podcasts postings of those in similar adventures such as riding a bike or a car around the world or through the Americas. Extreme learning also includes more sedate and passive forms of learning including watching an online video in TED, LinkTV, CurrentTV, or YouTube.

Adventure Learning

(e.g., GeoThentic, Earthducation, Polar Husky, GoNorth; Aaron Doering, Univ of Minnesota; cars and bikes--Dan Grec and Mark Beaumont)

This slide contains a collage of images and text related to adventure learning. It includes a person on a bicycle, a person in a white coat, and various outdoor scenes. Text elements include 'The road choice', 'DAILY UPDATE 1-15-11', and 'EARTHEDUCATION'.

Extreme learning?

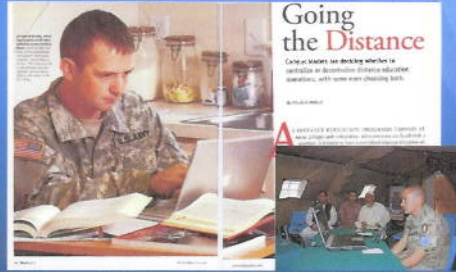
- Through extreme learning Web resources, those stuck behind prison walls, injured and in a hospital bed, or unemployed and unable to pay for college tuition can learn to be more productive members of society. Others might be in transition from one career to another and find open educational resources and OpenCourseWare can arouse new interests and confidence (Iiyoshi & Kumar, 2008).

Extreme learning?

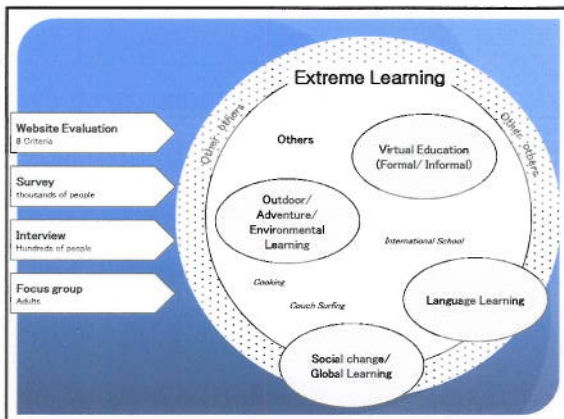
- Still others might be retired and offer their educational ideas and mentoring services to anyone interested in the topic. Others might be earning their MBA while in war zones in Iraq or Afghanistan.



Learning in War Zones



Learning in War Zones



Methodology

Locating Websites Under Five Categories

- (1) language learning
- (2) outdoor/adventure
- (3) social change/global
- (4) virtual education and
- (5) other/miscellaneous

Developing of Coding scheme

- (1) content richness
- (2) the functionality of the technology
- (3) the extent of technology integration
- (4) the novelty of the technology
- (5) the uniqueness of the learning environment/learning
- (6) the potential for learning
- (7) the potential for being life changing and
- (8) the scalability of the audience

Analysis of Technologies

Websites scored relatively high (above 3.5) were chosen for further review. Identified technology tools used to categorize into three different types including content delivery tools, interactive tools, and activity tools.

Table 1. Extreme Learning Web Site Coding Scheme

Criteria	Definition
Content Richness	This criterion deals with how much information the Website, resource, or project contains on the topic chosen, how adequately it fulfills the purpose of learning, and whether the information is credible and up-to-date or not.
Functionality of Technology	This criterion deals with the ease of access, navigation, and use of the Website, resource, or project and whether it contains effective and appropriately employed technology to serve the stated learning purpose.
Extent of Technology Integration	This criterion deals with the range, amount, and types of technologies employed including issues of interaction, collaboration, and information collection, contribution, and community through such technology.
Novelty of Technology	This criterion deals with whether the Website, resource, or project contains emerging, unusual, or novel technologies.
Uniqueness of Learning Environment / Learning	The Website, resource, or project serves the purpose of learning in a non-traditional, unique, or extreme learning environment, which is highly different from traditional classroom settings.
Potential for Learning	This criterion deals with whether the Website, resource, or project enables and provides learning activities or learning opportunities for the target audience to achieve the intended learning goals.
Potential for Life Changing	This criterion deals with whether the Website, resource, or project influences or improves the quality of life and extends or changes the perspective of the world for the intended audience.
Scalability of Audience	This criterion deals with the potential impact of the Website, resource, or project including the possibility to broaden the size and scope of its potential intended audience.

Table 2. Compare average and average for technology in Extreme Learning Websites

Categories	Websites	Average	Average of Technology criteria
Language Learning	Livemocha	4.4	4.4
	BBC Learning English	4.0	4.0
	Chinese Pod	3.8	4.3
	Palabea	3.7	3.8
Outdoor / Adventure learning	Kan Talk	3.6	3.4
	Nciku	3.5	3.5
	EarthEducation	4.0	4.0
	Jon Bowmaster	3.9	4.3
Social Change / Global Learning	Around the World 4th Expedition	3.4	3.4
	Polar Inquiry	3.6	3.6
	Impossible/possible	3.8	3.2
	Penguin Science	3.5	3.2
Virtual Education	Explore Arctic	3.5	3.2
	Line TV	3.7	3.8
Other/ Misc.	Khan Academy	4.1	4.2
	MIT Open Courseware	3.8	3.4
	MIT OCW for High School	3.7	3.4
	Open Yale Courses	3.5	4.0
	Ed Tech talk	4.0	3.4
	Edutech	3.4	3.5

The average of technology-related items and of eight criteria for extreme learning websites evaluation for each of the 40 categories of the technology. 4.0 for each of technology, interaction and the quality of the technology.

Findings: 1. Language Learning

Websites	Contents Delivery Tool	Interactive Tool		Activity Tool
		Synchronous	Asynchronous	
Livemocha http://www.livemocha.com	<ul style="list-style-type: none"> Video Flashcard 		<ul style="list-style-type: none"> Instant message 	<ul style="list-style-type: none"> Game Tutoring for others Culture sharing Quiz Game
BBC Learning English http://www.bbc.com/learningenglish	<ul style="list-style-type: none"> Video Audio Podcast 		<ul style="list-style-type: none"> Blog Facebook Twitter Message Board 	
Chinese Pod http://www.chinesepod.com	<ul style="list-style-type: none"> Lesson PDF/Text Audio Video 		<ul style="list-style-type: none"> Online post Blog 	
Palabea http://www.palabea.com	<ul style="list-style-type: none"> Video Text Podcast 	<ul style="list-style-type: none"> Voice/Video chat 	<ul style="list-style-type: none"> Text chat Forum 	<ul style="list-style-type: none"> Virtual classroom
Kan Talk http://www.kantalk.com	<ul style="list-style-type: none"> Video Recording 	<ul style="list-style-type: none"> Skype 	<ul style="list-style-type: none"> Instant message 	
Nciku http://www.nciku.com	<ul style="list-style-type: none"> Audio Electronic dictionary Mobile application 		<ul style="list-style-type: none"> Facebook Twitter Blog Instant message 	

Livemocha: <http://www.livemocha.com>



Home



Lessons

Connection with People

Chinese Pod: <http://chinesepod.com>



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Mobile Support



Various Tool Supports

BBC Learning English: <http://www.bbc.co.uk/worldservice/learningenglish>



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Topics from Everyday Life



Assessment Tool


Recap: 1. Language Learning

- The six highly rated learning Websites were: Live Mocha, BBC Learning English, Kan Talk, Palabea, Chinese Pod, and Nciku.
- Given the communicative nature of language learning, these sites share some common characteristics that enable language learners to **improve their communicative skills** in the target language.

Findings: 2. Outdoor / Adventure Learning

Websites	Contents Delivery Tool	Interactive Tool		Activity Tool
		Synchronous	Asynchronous	
Earthducation	<ul style="list-style-type: none"> Video journals Picture gallery Online Archive Google earth 	-	<ul style="list-style-type: none"> Facebook Flickr Video Narrative Tool 	-
Jon Bowermaster	<ul style="list-style-type: none"> Blog Video RSS Newsfeed E-book + Photo gallery 	-	<ul style="list-style-type: none"> Facebook Twitter Youtube Facebook Twitter RSS 	-
Around the World 4 th Expedition	<ul style="list-style-type: none"> Journal Photos Videos Google map 	-	<ul style="list-style-type: none"> Facebook Twitter RSS 	-
Polar Husky	<ul style="list-style-type: none"> Audio documentary Video documentary Movies Journals Tutorials Newsletter Video Photo Electronic Document 	<ul style="list-style-type: none"> Weekly chat 	<ul style="list-style-type: none"> Q&A Message Forum 	<ul style="list-style-type: none"> Weekly quiz
Impossible2possible	<ul style="list-style-type: none"> Electronic Document Videos Photos 	-	<ul style="list-style-type: none"> Facebook Twitter Expedition live tracker (GPS) 	-
Penguin Science	<ul style="list-style-type: none"> Electronic Document Videos Photos 	-	<ul style="list-style-type: none"> Forum RSS Facebook Twitter 	-
Explore Arctic	<ul style="list-style-type: none"> Videos Photos Electronic Document 	-	<ul style="list-style-type: none"> Forum RSS Facebook Twitter 	-


Earthducation: <http://it.umn.edu/earthducation>



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Field Update



Focused on Real Issue

Jon Bowermaster : <http://www.jonbowermaster.com>



Home




Blog



Videos

Polar Husky : <http://www.polarhusky.com>



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Modules



Forums

Recap: 2. Outdoor / Adventure Learning

- Proper utilization of media tools is the key to fostering **authentic learning experiences** within the hybrid online environment.
- For maximum efficacy, **high-quality visuals are essential elements** in providing students with opportunities to explore real-world issues through authentic learning experiences within collaborative learning environments.

Findings: 3. Social Change / Global Learning

Websites	Contents Delivery Tool	Interactive Tool		Activity Tool
		Synchronous	Asynchronous	
Link TV	<ul style="list-style-type: none"> Music Blog RSS E-newsletter Video journals Podcasts 	<ul style="list-style-type: none"> Weekly live chat 	<ul style="list-style-type: none"> Twitter Online Forum 	-

Link TV: <http://www.linktv.org>

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Synchronous Forums

Recap: 3. Social Change / Global Learning

- Primary tools are streamed video clips with a news description as well as embedded Twitter feeds for viewer engagement. Podcasts, RSS Newsfeeds, and e-newsletters are also used to send up-to-date news to viewers. To share world culture, Link TV also runs a music blog where international and local concerts, festivals, and interviews with musicians are updated.

Findings: 4. Virtual Education

Websites	Contents Delivery Tool	Interactive Tool		Activity Tool
		Synchronous	Asynchronous	
Khan Academy	<ul style="list-style-type: none"> • Videos lecture 	-	<ul style="list-style-type: none"> • Online Forum 	<ul style="list-style-type: none"> • Online Exercise Tool • Progress Showing Tool
MIT Open Courseware	<ul style="list-style-type: none"> • Online Textbooks • Image Galleries • Video/Audio Lecture • Electronic Document • Online Archive 	<ul style="list-style-type: none"> • Chat room 	<ul style="list-style-type: none"> • Online Forum 	-
MIT OCW for High School	<ul style="list-style-type: none"> • Online Textbooks • Image Galleries • Video/Audio Lecture • Electronic Document • Online Archive 	<ul style="list-style-type: none"> • Chat room 	<ul style="list-style-type: none"> • Online Forum 	-
Open Yale Courses	<ul style="list-style-type: none"> • Video/Audio Lecture • Electronic Document 	-	-	-

Khan Academy: <http://www.khanacademy.org>

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Assessment

Lessons

MIT Open Courseware:
<http://ocw.mit.edu>

Help millions reach their potential.

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Assignments

Video Lecture

Open Yale Courses:
<http://open.yale.edu>

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Video Lectures

Downloadable Resources

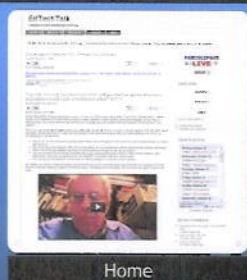
Recap: 4. Virtual Education

- To effectively disseminate tons of educational materials to the public via the Internet, the appropriate selection of technology and its proper usage seems vital and inevitable.

Findings: 5. Other/miscellaneous

Websites	Contents Delivery Tool	Interactive Tool		Activity Tool
		Synchronous	Asynchronous	
Ed Tech Talk	<ul style="list-style-type: none"> • Audio • Video • Text • Webcast 	• Chat room	-	• Chat room
Explo.tv	<ul style="list-style-type: none"> • Video • Webcast • Slideshow • Podcast 	-	-	-

Ed Tech talk : <http://edtechtalk.com>



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Chat Rooms

Recap: 5. Other/miscellaneous

- Common feature of the websites in this category is the use of video and webcasts to deliver content. This means using videos might be a very good way to engage learners and improve learning in the self-directed learning environment.

Conclusion

- Technology tools were chosen to accomplish the intended purposes of each website
- Selection of tools is dependent on the natures of education category
 - Virtual education: focuses on a way of effective transfer of educational materials primarily used for content delivery tools.
 - Language education: offers a highly interactive resource for with audio/video forums
 - Outdoor and adventure learning: provide an authentic learning environment in with visuals for effective learning.
- Further data collection and investigation is needed related to how technology tools influence the design of extreme learning environments.

References

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