The Adventure of Extreme Learning: Documenting Impactful Online Learning Experiences and the Potential for Life Change

Curtis J. Bonk, Professor, IU, cjbonk@indiana.edu
Justin Whiting, Doc student, IU, juswhiti@umail.iu.edu
and
Eulho Jung, Minkyoung Kim,
Abdullah Altuwaïjri, Verily Tan, Yurong Wang
Indiana University

Change not possible as an accountant...
(Life as a CPA, 1981-1986)

Decided to Read, Read, Read...
(e.g., People like Albert Bandura, Howard Gardner, Roger Schank, Elliot Soloway, etc.)

Took Correspondence & TV Courses
thanks to Bob Clasen and Charles Wedemeyer, the University of Wisconsin

Audience Poll:
Raise your hands if learning technology has ever transformed your life.
Fast Forward 25 Years...
“Anyone can now learn anything from anyone at any time.”

1. Portals of OER (MIT OpenCourseware, Open Yale)

2. Online Language Learning (BBC Learning English)

3. Social Change and Global Education (e.g., Longitude, iCivics)

4. Shared Online Video (e.g., CurrentTV, GetIdeas)

5. Adventure Learning (e.g., Earthducation)
6. Virtual Education (Khan Academy)

We are entering a jumping off point...

Learn Anytime, Always On/Mobile

Robert Johnson, who championed the open-format Learn Anytime program at a two-year college in Louisville, Ky. checks students' e-mail while waiting for a flight. "Everything I need to do today, I can do on my phone."

Totally Extreme Learning...

Extreme Learning Defined (Bonk, 2011)

"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."

Extreme Learning continued... (Bonk, 2011)

"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" (see 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."

Extreme Learning Areas

1. Adventure Learning and environmental education
2. Virtual Education (formal as well as informal)
3. Social Change and Global Learning
4. Language Learning
5. Shared online video
6. Learning portals

Visual Representation of Extreme Learning

Totally Extreme #1. Blogging Field Archeology Research (e.g., Lily Henry Roberts, UCLA digging in Hope, BC, Stó:lō First Nation people from 12,000 years ago)

Totally Extreme #2. Virtual High School Learning by Boat (e.g., Bridey Fennell and her family sailing and learning in the Caribbean)

Totally Extreme #3. Kids Learn Online, Teach Online (e.g., the World’s Youngest Teacher; Adora Svitak)
Totally Extreme #4. OER (iPod) Learning from MIT OCW  
(e.g., Wendy Ermold, University of Washington)

Totally Extreme #5. Global and Environmental Education  
(e.g., Cassandra Brooks: The Last Ocean Project, Ice Stories, and Shark Theater: a 24 foot inflatable screen and outdoor ocean theater to tiny islands)

Totally Extreme #6. Online Language Learning  
(e.g., 300,000 people per month listening to ChinesePod, PalTalk, iTalki, Palabea, Babbel)

Totally Extreme #7. Shared Online History Videos  
(e.g., "History for Music Lovers" with over 50 songs including: Trojan War "Tainted Love" by Soft Cell; Charlemagne "Call Me" by Blondie, Cleopatra, Napoleon, Shakespeare, the Vikings)

Totally Extreme #8. Global Education and Virtual Education (South African teens get virtual mentoring), Danielle Berger, CNN, Jan 14, 2011  

Totally Extreme #9. Massive Open Online Courses (MOOC)  
(e.g., Fall 2011 Stanford AI Course 135,000+ sign up; Summer 2011 Online Learning Course, Ray Schroeder, U. of Illinois at Springfield, 2,700+ sign up)
Totally Extreme #10. Military Mobile Learning and MBAs from War Zones (U.S. Army Learning Concept for 2015, January 2011). 
http://www.youtube.com/watch?v=KD9NGAV3-3k (4:26 minutes)

Extreme Learning Website

Extreme Team Research
Content Analysis of over 300 websites

Web Site Coding Scheme

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Content Richness</td>
<td>This criterion deals how adequately it fulfills the purpose of learning, and whether the information is credible and up-to-date or not.</td>
</tr>
<tr>
<td>2. Functionality of Technology</td>
<td>This criterion deals with whether it contains effective and appropriately employed technology for the stated learning purpose.</td>
</tr>
<tr>
<td>3. Extent of Technology Integration</td>
<td>This criterion deals with whether it contains emergent, unusual, or novel technologies.</td>
</tr>
<tr>
<td>4. Uniqueness of Learning Environment/Learning</td>
<td>The purpose of learning is highly different from traditional classroom settings.</td>
</tr>
<tr>
<td>5. Potential for Learning</td>
<td>Learning activities or learning opportunities for the target audience to achieve the intended learning goals.</td>
</tr>
<tr>
<td>6. Potential for Life Changing</td>
<td>This criterion deals with whether it contains emerging, unusual, or novel technologies.</td>
</tr>
<tr>
<td>7. Scalability of Audience</td>
<td>This criterion deals with whether it contains emerging, unusual, or novel technologies.</td>
</tr>
</tbody>
</table>

Content Analysis Findings

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functionality of Technology</td>
<td>3.05</td>
</tr>
<tr>
<td>Extent of Technology Integration</td>
<td>2.63</td>
</tr>
<tr>
<td>Novelty of Technology</td>
<td>3.11</td>
</tr>
<tr>
<td>Uniqueness of Learning Environment/Learning</td>
<td>2.76</td>
</tr>
<tr>
<td>Potential for Learning</td>
<td>3.15</td>
</tr>
<tr>
<td>Potential for Life Changing</td>
<td>3.25</td>
</tr>
</tbody>
</table>

305 Websites individually evaluated by 4 raters
Coolest Websites

<table>
<thead>
<tr>
<th>Categories</th>
<th>Coolest websites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Online Language Learning</td>
<td>Live Mocha, BBC Learning English, EnglishPod, Chinese Pod</td>
</tr>
<tr>
<td>2. Virtual Education</td>
<td>MIT OpenCourseWare (OCW), Highlights for High School, Khan Academy, Open University UK-OpenLearn, Ed Tech Talk, John Hopkins OpenCourseWare, NASA for Educators, Florida Virtual School, Smithsonian</td>
</tr>
<tr>
<td>3. Social Change/Global Education</td>
<td>iCivics</td>
</tr>
<tr>
<td>4. Adventure/Outdoor Learning</td>
<td>Earth Education, Jon Bowermaster, Nautilus Live, Explore</td>
</tr>
<tr>
<td>5. Learning Portals</td>
<td>MERLOT</td>
</tr>
</tbody>
</table>

Extreme Learning Stories
Mobile Storytelling and Pocket Schools (e.g., Paul Kim, Stanford & Seeds for Empowerment)

HOPES: Humanity’s Open Platform for the Exchange of Stories

Sample HOPES Stories

Web Platform Storytelling System
HOPES Mobile Platform
Storytelling Entrance

DREAMS: Design Research for an Engaging and Active Mobile System

Extreme Learning “Stretches the Edges” of Humanity

What are your Extreme Learning HOPES and DREAMS?
Website: www.Extreme-Learning.com
Slides at: TrainingShare.com
Write to Justin: juswhiti@umail.iu.edu
Write to Curt: curt@worldisopen.com