A Mixed Methods Look at Self-Directed Online Learning… and the Design of Online Activities for Successful Online Experiences

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MIT OpenCourseWare (OCW)
http://ocw.mit.edu/index.htm

Fast Forward to 2015
MIT OCW and the OpenCourseWare Consortium

MIT OpenCourseWare (OCW)
http://ocw.mit.edu/index.htm

Fast Forward to 2015
Open Education Global 2015
http://conference.oecconsortium.org/2015/
October 1, 2012: MOOC Students
4 Massive Open Online Courses and How They Work, Ben Gose, Chronicle of HE

Rajeev Bajpai, an airline pilot based in Mumbai, took an online computer-science course to gain programming skills.

Krissa Swain, of Knoxville, Tenn., is taking “Operations Management” online to help develop her management skills.

September 18, 2013
MIT Will Offer MOOC Curricula, Not Just Single Courses, on edX, Steve Kolowich, Chronicle of HE

Rajeev Bajpai, an airline pilot based in Mumbai, took an online computer-science course to gain programming skills.

October 6, 2014
edX turns attention to high school MOOCs, eSchool News
http://www.eschoolnews.com/2014/10/06/hs-curriculum-learning online/

edX turns attention to high school MOOCs
Posted by eSchool News Staff on October 6, 2014 @ 5:00 am In Curricula/News Top News | No Comments

Courses will help prepare students for postsecondary success, edX reps said

Students attend an orientation session at Kepler, a new hybrid program in Kigali, Rwanda, which will use MOOCs and classroom time to help students earn competency-based associate degrees.

September 16, 2013
Rwandan Degree Program Aims for a ‘University in a Box’, Chronicle of Higher Education, Megan O’Neil
http://chronicle.com/article/Rwandan-Degree-Program-Aims/141631/

Students attend an orientation session at Kepler, a new hybrid program in Kigali, Rwanda, which will use MOOCs and classroom time to help students earn competency-based associate degrees.

February 24, 2013
Big (MOOC) Data, Inside Higher Education, Dayna Catropa

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
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<tbody>
<tr>
<td>Registered</td>
<td>12,725</td>
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<tr>
<td>Watched at least one video</td>
<td>7,761</td>
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<tr>
<td>Took any quiz during the course</td>
<td>3,658</td>
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<td>Scored 10 on both Week 1 quizzes</td>
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<td>Scored 10 on either quiz in Week 4</td>
<td>561</td>
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<td>Attempted the final exam</td>
<td>346</td>
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<td>Earned a certificate</td>
<td>313</td>
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<td>Earned a distinction certificate</td>
<td>285</td>
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</table>
February 5, 2013
Bioelectricity: A Quantitative Approach,
Duke University’s First MOOC

May 2013
MOOCs @ Edinburgh 2013—Report #1

May 2013
MOOCs @ Edinburgh 2013—Report #1

Self-Directed Learners (SDL) (Abdullah, 2001)
- Tend to be highly curious & generally enjoy learning
- View problems as challenges
- Desire change, willing to try new things,
- Persistent, self-disciplined, goal-oriented
- Independent, self-confident
- Make learning meaningful and relevant
- Self-monitor, evaluate, and regulate one’s learning

October 8, 2013
An Early Report Card on Massive Open Online Courses, Recap of Canvas courses
Geoffrey A. Fowler, WSJ Online

Study #1.
MIT OpenCourseWare (OCW) Study
- 1,429 completed surveys
- 613 completed open ended items
- 50% over age 40
- 76% males
- North America (44 percent); Asia (23 percent); Europe (14 percent); South America (10 percent); Middle East (3 percent); Oz (2 percent).
- Top countries in the MIT OCW subscriber list were the United States, India, China, Brazil, Nigeria, Pakistan, Iran, Canada, the UK, Taiwan, Indonesia, Mexico, and Egypt.
What obstacles faced?

What Obstacles Faced When Learning Informally Online (MIT OCW Group)

Open-Ended Questions

(28) Can you describe your most interesting or successful informal learning experience? What did you accomplish?

(30) Why did you want to do this learning activity or task? What was your purpose or goals? Please describe what captured your interest.

(31) Has your life changed in a small or big way as a result of this informal learning activity or experience? If so, how?

(32) What was the key moment when learning informally with technology where you felt a personal change? If so, please describe that moment, as best you can.

(34) Did you face any obstacles or challenges during this time when learning informally with technology? If so, how did you overcome them?

MIT Data: Inspires and Changes Ed Systems (18-20 year old male, Middle East)

When i was 14 years old i found MIT OCW during my search in...(physics) by Prof Walter Lewin looked really interesting and i became interested in physics. To be honest OCW changed my way of living and i found how beautiful physics is...informal learning is interesting because you can have access to some of the best courses provided by the best universities in the world...MIT OCW or Stanford open courses have also changed the educational system in some poor countries and have taught the teachers and professors in those countries how to teach a subject in a modern way.

MIT Data: Self-Taught on Social Media (21-30 year old unemployed female, North America)

At first my purpose was to fulfill boredom ...After graduating with a MS, I was faced with unemployment. I took the opportunity to read blogs, watch Youtube videos, and more to learn about blogging and social media. Since than I have become well versed in social media and other business topics and started a business... I decided not to pursue a PHD because I am learning a more rapid pace. Instead of spending 5 years in school, I can be flexible and work on what I am learning.

MIT Data: Enhances Current Job Prospects (31-40 year old male, Asia)

I learnt scheme from MIT OCW. Which helped in learning elisp/lisp. The programming techniques increased my software design knowledge. Algebra - mit ocw course was very useful, it helped me to refresh the basics of Digital signal processing. - I have learnt a lot of "applying my knowledge" than just learning the "theory" - Various online classes allow for multiple perspectives of the same topic thus showing us how the same thing can be applied in different fields.

MIT Data: Prepares to Reenter University (41-50 year old male, Middle East)

Most interesting experience of my own was my use of MIT OCW to refresh on Calculus. I purchased the textbook and followed one of several calculus options on the site. This was quite successful in re-introducing Calculus, as a prep to re-entering college 28 years after graduation - this time to study for a Master's.
**MIT Data:**
Builds Expertise and Expert Connections
(51-60 year old female, North America)

I'm a virtual reference librarian... My friend and I have a blog about music cognition, which is a little crazy because we don't know anything about it. Nevertheless, we blog about current articles, and one experience was especially meaningful, where I tweeted a question to Daniel Levitin, who answered. He's the guy who wrote The World in Six Songs, among other things. The fact that you can communicate with an expert in the field who will take the time to give a thoughtful tweeted (and yes, 140 characters can be thoughtful)—well, that's amazing...I think it was the single most exciting learning moment I've experienced.

**MIT Data:**
Retiree Develops New Hobby
(65 year old male, North America)

I retired from education I became a lifestyle entrepreneur. I was trying to learn software to develop a business website for our sailing business. I discovered...Lynda.com. I was learning web development, video editing and photoshop. I realized that I could learn this software without going to a formal class and that was an "eureka" moment... My wife and I travelled and started a yacht delivery and training business that has taken us all over the world. We learned technology and social media as we travelled and ended up with many fantastic experiences in some very exotic places. We taught ourselves web development and have been figuring out online learning as we went. Now at 65 years of age we are going back to university to take a Computer Science Degree and start a new tech business relating to interactive educational media and games. All very exciting :-)

**MIT Data:**
Retiree Develops New Hobby
(70+ year old female, North America)

I'm an avid photographer and have developed skills for developing my own website for display of my photography and books I have written that include my photographs... I've had multiple careers, from science, to public administration, and information technology. The development of my art is a new and exciting experience.

**Study #2.**
Blackboard (CourseSites) MOOC

[http://events.blackboard.com/open](http://events.blackboard.com/open)

- Survey notice sent to 3,800 MOOC participants
- 159 completed surveys
  - 49 completed open ended items
  - 72% over age 40
  - 73% females
  - North America (81 percent); Asia (2 percent); Europe (6 percent); South America (1 percent); Middle East (2 percent); Australia/NZ (7 percent); Africa (1 percent)

**Blackboard Data**

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Figure 3. Specific skills wanting to learn informally online
Figure 4. Main reasons to informally explore the Web to learn

Figure 5. Achievements from learning informally online

Figure 6. Factors leading to success or personal change when learning informally online

Who typically supports your informal learning experiences?

Experience life change?

Open-Ended Questions

(28) Can you describe your most interesting or successful informal learning experience? What did you accomplish?

(30) Why did you want to do this learning activity or task? What was your purpose or goals? Please describe what captured your interest.

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(34) Did you face any obstacles or challenges during this time when learning informally with technology? If so, how did you overcome them?
Goals and Motivations (Blackboard MOOC)

- Improve their job prospects
- Pursue personal interests or hobbies
- Seeking certification of some type
- Information seeking
- Means to expand one’s formal learning

Life Changing Example #1

“I grew in every possible way. Not only were my own ideas validated but I was encouraged to go beyond what I thought possible - maybe I would call it "Extreme DOING" the other half of extreme learning no? These bold steps have shaped my personal and professional life to a profound level.”

Life Changing Example #2

“Yes, I view the way I make choices, the way I raise my children, the way I teach, the way I negotiate international agreements fundamentally different. There are no huge differences in the decisions because the same set of values inform the decisions, but the approach, the motivations, the incentives are modified in substantial ways as a result.”

Life Changing Example #3

Yes. I plan to focus my Ph.D. research on alternative forms of learning (informal DIY) and credit (like open badges) and the changes higher ed and employers will have to make to accept these forms of credit.

Life Changing Example #4

It has made my job much easier and it’s been easier for me to execute certain tasks, making me more willing to take on bigger challenges. It was also shown me how enjoyable it is to learn a computer language. It opened my mind to considering possibilities in this area. It also made my husband respect my ability around computers a bit more.

Life Changing Example #5

Some of my friends tell me that they love the nuggets of information that I share with them when talking about things I learned during short commutes, etc. They have started listening to podcasts and share similar nuggets about the fields that they care about.
Life Changing Example #6

My life has changed in a big way. I used these new skills to create a small business that supplements my income. I couldn’t use this income solely to support myself, but it does pay some bills.

Life Changing Example #7

Without the opportunity to learn informally, my options within my doctoral program would be limited to the ideas and experience of the three instructors in my program track. I would be graduating with a firm grasp of 20-year old dated ideas!

Life Changing Example #8

“Well, my life changed in that I thought I knew how important place and stories where to indigenous people… I learnt loads about indigenous culture and places and loads about augmented reality so now I know I have to change the project to allow students to have the same experience — them creating the content not me which I knew but didn’t take it into consideration enough when planning the project. I wanted to create a project that made students (university) aware of how pervasive indigenous culture is contemporary Australia — how important place is to indigenous people and how their culture is so connected to place through stories…”

Life Changing Example #9

My life has changed in a big way — as the MOOC helped me to re-design one of the educational approaches in my workplace by providing a more interactive, innovative learning experience.

Life Changing Example #10

It has changed because I have learned new things and got more creative in my own field...The key moment was when I felt that the world is now becoming open as Dr. bonk describes it. I don’t need to travel to different countries and spend my time and money trying to get a new idea or learn a new skill. I can have the access to quality materials, novel ideas and experts anywhere and any time.

Life Changing Bonus #1

Easy access to the Internet changed my life drastically. I quickly discovered Japanese manga (comics) and anime (animated TV shows). I spent the next three years absorbing Japanese culture and language voraciously. .. I got interested enough that I did 1 1/2 years of Japanese as an online correspondence course.
Life Changing Bonus #2

While taking a linear algebra course at Everett Community College, I supplemented my formal coursework with video lectures from <http://ocw.mit.edu/courses/mathematics/18-06-linear-algebra-spring-2010/>. I actually began watching the lecture videos in anticipation of taking the class. While learning about eigenvectors and eigenvalues, I found the OCW lecture to be of great help. I watched it over and over until I understood the material thoroughly. As a result, I aced the formal test and completed it in under 10 minutes!

Life Changing Bonus #3

While conducting a family history search for my doctoral research, I allowed the 'links to lead me' and discovered an abundance of clues, data and ideas which shaped a significant part of my study -- and had a great impact on the successful completion of my doctoral dissertation. The web resources were not the only resource utilized, however, allowed for expanded awareness of other sources, including books I was not aware of, etc.

Information Seekers (DIYers): Personal Identity

"Today, we were trying to install a pool filter--we got instructions off Youtube. I also just bought a recumbent exercise bike--I looked at online reviews before making a choice." She then added, "Knowing that I did not need to ask an actual person for help was life changing. I am an introvert by nature, and I prefer to figure things on my own. Knowing that I can research informally on the Web is reassuring."

Joining a Learning Community

"My key moment came when I discovered a community of like-minded scholars from around the world. I no longer felt isolated or disconnected. This has become my most valuable support network and I am grateful."

Information Seekers (DIYers): Personal Identity

"My informal learning experience did influence my social life, as my travel buddy for the convention thought that I was incredibly smart and tremendously "with it," because I knew so much about the city, what to see, and how to get places. It’s nice (if not slightly narcissistic) to be appreciated for your knowledge."

Joining a Learning Community

("social and intellectual capital"

"Influenced my professional life - I guess I have more social capital."

"Today, we were trying to install a pool filter--we got instructions off Youtube. I also just bought a recumbent exercise bike--I looked at online reviews before making a choice." She then added, "Knowing that I did not need to ask an actual person for help was life changing. I am an introvert by nature, and I prefer to figure things on my own. Knowing that I can research informally on the Web is reassuring."
Joining a Learning Community
(social and intellectual capital)
“Socially the impact was great as well because now I have friends I can talk technology with a lot.”

Seeking Relevance
“I almost always listen to podcasts or .mp3 audio books, etc. when biking. After one session of learning some Korean language on a bike I was on my way home and chose to stop into a store for some take-out food. The conversation was almost identical to the lesson I had just learned. Although the questions and answers were simple and predictable small talk, it really was surreal at just how closely the real-world small talk conversation matched the mp3 that was produced a few years ago. It really gave me confidence that the audio recording method was not a joke.”

Challenges and Issues
- Discern the quality of information
- Evaluate the quality
- Informal learning not taken seriously by their superiors
- Certificates and badges may reduce sense of fun and learning enjoyment

MOOC Challenges: Finding Appropriate Ones
“I think the hardest part is finding a MOOC that would work. It is not like there is a directory of MOOCs. You get out what you put in - the more you put in - in terms of writing and connecting the more you will get out of the experience. While the experience is informal - you need to give it more of a formal importance in your daily schedule.”

Learning for Enjoyment Versus Credentials and Badges
“Just play around with ideas for alternatives to printed texts and don’t be afraid to create your own, even if they’re amateurish...I think we need to de-emphasise formal assessment and accreditation and encourage our playful side to see what is possible. Too much informal learning wants to get itself ‘badged’ or validated too quickly and this means its losing its genuine amateur status.”
Results: Accomplishments (Kou, 2013)

- **Research** (7)
  - Obtained information, references, clues, data and ideas on a topic (6)
  - Had the potential of real life application (1)
- **Formal Learning Context** (23)
- **Informal Learning, Self-Study** (61)
- **Social Context** (30)
- **Working Context** (26)
- **Across Context**: Enhanced thinking (13)
  - Across Context: Find solutions to solve a problem, find out how to do something (10)

Results: Accomplishments Formal Learning Context (Kou, 2013)

- **(Before Program)** Online learning helped me get prepared for, get interested in, or become confident in pursuing formal schooling or a higher degree (6)

Results: Accomplishments Formal Learning Context (Kou, 2013)

- fill intellectual hole
  - I have been out of graduate school for many years and have had this intellectual hole for a while now which these courses are starting to fill for me
- Feel better:
  - developed self-respect, gained confidence, developed inner strength, gained sense of self-control
  - It gave me confidence that my intelligence is valued by the best of universities.
  - Yes indeed on a personal level I developed self respect for my own self, I started realizing the potential I had and I found out that I can make an impact in the society with the knowledge I gained
- Motivated to become a selfless human being
  - It has also motivated me to become a selfless human being, if all of us spend some time and share our knowledge then one day everyone will be educated

Results– Accomplishment: Social Context

- Become cool in social life, attract interests from people around, got recognition for my knowledge and skills, opened up conversations
  - I got better grades in my studies, more appreciation, and more respect from people toward the activity I do.
  - Yes it has impact on my life in the way mostly me friend consult me when they got some problem which they can not solve.
  - I had new and interesting topic for discussions.

Results– Accomplishment: Social Context

- parenting-Became better parents, less stressful, make home school easier
  - Significant changes. We can say we are "homeschooling" and yet the curriculum and materials are available online and I can support my kids while they have the loose structure of the courses.... Knowledgeable teachers allow me to facilitate and not have to relearn everything.
  - Studying online at MIT has made me a better professor, a better dad

Results– Accomplishment: Work Context

- Got certificate for a profession, Got ready for job market, Did well on job interview, Got a job (7)
- Gained useful information, expertise, strategies and perspectives for my job
- Improved work performance, useful to work, retain my job, applied learning to job, impact on business (11) (Including teachers)
- Feel more confident or secure in my job (2)
- Career change or may lead to career change, Ability to switch jobs easily (3)
Results– Accomplishment: Across Context

- introduced to cultural diversity; more open minded, see things in different light
  - I have learned numerous approaches to viewing subject matter. The peer forum portion of the course and its global reach is enriching.
  - I find myself more generally open to new ideas and want to engage in conversations and doing new things.
  - It introduced me to cultural diversity, which is almost nonexistent where I live. I think that this exposure to other cultures is one of the main reasons that I find racism absurd. It also interested me in many new activities...

Results– Accomplishment: Other Impact

- Changed learning pattern—open my eyes for online learning, engage in more online learning, take advantage of technology (5)
- Changed life pattern: spend time on learning instead of entertainment (2)
- Changed life pattern: take a different (better) course in life (1)
- Changed life pattern: become busier than before (1)
- Changed life pattern: life enriched (for older or disabled people), Developed interest in new activities, Found something challenging (4)
- Changed life pattern: could retire but will continue to study (2)
- Do NOT have to change: can continue work due to easy access and flexibility of online learning (1)
- Impact on society: help addicted people turn to learning (1)
- Impact on the world: influence on foreign educational system (1)

Informal Learner Characteristics

- Strong intrinsic motivation, pride themselves being a “self-directed learner” —“my own pleasure” and values autonomy, considers it empowering
- Considers sharing as important part of educ/learning
- Takes pride in creating and contributing
- Enjoys the community of people with similar interests---but not necessarily the human f2f interaction

Informal Learner Characteristics: Values SDL

“I continue to research my interests for my own pleasure, especially on sites like Amazon for books and e-books, and have ongoing email alerts for journal content. I also use online sources for job hunting and professional networking.”

Informal Learner Characteristics: Self-Reliant

“Knowing that I did not need to ask an actual person for help was life changing. I am an introvert by nature, and I prefer to figure out things on my own. Knowing that I can research informally on the Web is reassuring.”
Components of Successful MOOC Learner

- Self-motivated
- Enjoys sense of creating
- Shares their creation
- Delights in wide range of info resources
- Takes pride in learning on their own

Engage Number One:
TEC-VARIETY: A Model for Motivating and Retaining Online Learners

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Learning is More Self-Directed
Online Learning Polyglots

Timothy posts videos of himself speaking several languages on YouTube.

Motivation and Engagement
What did Jean-Luc Picard say?

That’s right, Engage!

Poll #1: Million Dollar Question: What words come to mind when I say that I want to motivate learners?

Motivation Research Highlights (Jere Brophy, Michigan State University)

1. Supportive, appropriate challenge, meaningful, moderation/optimal.
2. Teach goal setting and self-reinforcement.
4. Novelty, variety, choice, adaptable to interests.
5. Game-like, fun, fantasy, curiosity, suspense, active.
6. Higher levels, divergence, dissonance, peer interaction.
7. Allow to create finished products.
8. Provide immediate feedback, advance organizers.
9. Show intensity, enthusiasm, interest, minimize anxiety.
10. Make content personal, concrete, familiar.

Intrinsic Motivation

“...innate propensity to engage one’s interests and exercise one’s capabilities, and, in doing so, to seek out and master optimal challenges (i.e., it emerges from needs, inner strivings, and personal curiosity for growth)


Framework: TEC-VARIETY for Online Motivation and Retention

1. Tone/Climate: Psych Safety, Comfort, Belonging
2. Encouragement, Feedback: Responsive, Supports
3. Curiosity: Fun, Fantasy, Control
4. Variety: Novelty, Intrigue, Unknowns
5. Autonomy: Choice: Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactive: Collaborative, Team-Based, Community
8. Engagement: Effort, Involvement, Excitement
9. Tension: Challenge, Dissonance, Controversy
10. Yields Products: Goal Driven, Products, Success, Ownership
Education 3.0?
Introducing the free “TEC-VARIETY” Framework...
http://tec-variety.com/

Examples of TEC-VARIETY

1. Tone/Climate: A. Threaded Video Discussions, e.g., Flipgrid
http://flipgrid.com/#429f88c5

1. Tone/Climate: B. Video Introductions (Office Hours in Other Countries)
Chuck Severance, U Michigan/Coursera in Barcelona
http://www.youtube.com/watch?v=jZzNHvmSvTI
Chuck Severance, University of Michigan
https://www.coursera.org/course/pythonlearn

2. Encouragement, Feedback, etc.: A. Demonstrations and Tutorials
Emerging technology specialist, IU UITS, Nitocris Perez,
May 29, 2014

1. Risk
Low Risk → High Risk
Easy to Embed → Extensive Planning

2. Time
Free or Inexpensive → Enterprise Licenses

3. Cost
Instructor-Focus → Student-Focus
Low → High

4. Student-Centered
Low → High

2. Encouragement, Feedback, etc.: B. Voice/Audio Feedback
Vocaroo: http://vocaroo.com/
http://vocaroo.com/s/xKQ7nmi83N
(Recorded by Curt Bonk for the Open University of China)

2. Encouragement, Feedback, etc.: C. Class Facebook Group
Dr. Bonk’s creative fun group (R546)
https://www.facebook.com/groups/830496290323899/

2. Encouragement, Feedback, etc.: D. Videos and Online Quizzes
(e.g., Want to be an activist? Start with your toys - McKenna Pope, TEDEd)

October 4, 2014
2. Encouragement, Feedback, etc.: C. Class Facebook Group
Dr. Bonk’s creative fun time group (R546)
https://www.facebook.com/groups/830496290323899/

October 23, 2014: Goofy dinosaur blends Barney and Jar Jar Binks, SF Gate

May 25, 2015
3. Curiosity, Fun:
A. Something in the News
(e.g., Chinese universities move up in world rankings, China Daily)
http://www.cnn.com/2015/01/30/asia/china-dragon-dinosaur/index.html

3. Curiosity, Fun:
B. Something in the News
New ‘massive’ dinosaur skeleton discovered, USA Today,
September 5, 2014 (Dreadnoughtus)

3. Curiosity, Fun:
C. Something in the News
(e.g., This may be the oldest surviving Photo of a human, November 7, 2014, CNN, Brandon Griggs; But this image, taken in Paris, France, in 1838)
3. Curiosity, Fun:

D. Tracking the Life of a Computer Scientist (bio.com)
http://www.biography.com/people/steve-jobs-9354805
http://www.biography.com/people/ada-lovelace-20825323

E. Tracking the Life of a Computer Scientist (Wikipedia)

Poll #2:
Which of these ideas might you use?

A. Threaded video discussions (e.g., Flipgrid)
B. Video introductions (instructor or student)
C. Demonstrations and tutorials (Jing, Screenc, etc.)
D. Voice/Audio feedback (Vocaroo)
E. Online practice tests
F. Something in the news
G. Tracking life of scientist

4. Variety, Novelty, Fun, Fantasy:

A. Teach from Vietnam to the World
BBC News Asia, August 14, 2013
Even though he is now very elderly Vinh Bao (age 96) still teaches music, using his computer to coach pupils across the globe.

B. Random Lists (Random.org—clocks, coins, playing cards, dice, integers, passwords, jazz scales, lists, sequences, etc.)

March 13, 2015
5. Autonomy, Choice:

A. 20% Time in Education
Kendal Rasnake & Troy Cockrum, IU
https://www.dropbox.com/s/chorheaxkipzew/20_Time_in_Education_Cockrum_and_Rasnake.pdf?dl=0
5. Autonomy, Choice:
B. Enroll in a MOOC and Reflect (e.g., see Class Central)

Cathy Davidson, The End of Higher Education
http://connectedcourses.net/thecourse/why-we-need-a-why/

5. Autonomy, Choice:
C. Attend Webinar (pick weeks and reflect)

D. Design Multimedia Glossaries
Ozgur Ozdemir, December 2012
http://r685glossary.shutterfly.com/
Umida Khikmatillaeva, Dec. 2011, P540
http://learningplanet.shutterfly.com/

E. Design Article Database in Pinterest,
Jenny Webeck
https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/

F. Design Article Database in Facebook,
Jenny Webeck
https://www.facebook.com/JennyBELTT/timeline

6. Relevance, Meaningfulness:
A. Guest Chats (e.g., Emily Hixon, January 20, 2015)
https://connect.iu.edu/p259wpia9/
6. Relevance, Meaningfulness:
B. Case-Based Learning: Instructor Cases (e.g., Mark Braun, IU)

7. Interactive, Collaborative:
A. Negotiate Meanings Online (e.g., PiratePad: http://meetingwords.com/)
MeetingWords, Google Docs, NowComment, MixedInk

January 27, 2015
7. Interactive, Collaborative:
B. Backchannel Chat (TodaysMeet)
https://todaysmeet.com/
R678_Emerging_Learning_Technologies
https://todaysmeet.com/R678_Emerging_Learning_Technologies

7. Interactive, Collaborative:
C. Q&A Web Conferencing (Adobe Connect, Jabber, iMeet, GoToMeeting, etc.)
https://connect.iu.edu/p259wpiabg9/

7. Interactive, Collaborative:
D. Multiple Guest Experts
Sara de Freitas and Jim Hensman, U of Coventry, UK
https://connect.iu.edu/p2ie1yx6z6x/
Jay Cross, Berkeley
https://connect.iu.edu/p4bytsoronh/

7. Interactive, Collaborative:
E. Collaboration and Discussion in Google Hangouts, Jabber, Skype, etc
(January 29 and February 25, 2013)
Poll #3: Which of these ideas might you use?

A. Student designed multimedia glossaries
B. Article database in Pinterest
C. Guest chats with former students
D. Negotiate meanings online (e.g., PiratePad)
E. Backchannel chat (Todaysmeet)
F. Class Facebook group
G. Discussion in Google Hangouts

June 10, 2014, Chronicle of HE, 300 images, more than 700 notes and explanations, multimedia annotations, video commentary, and two dozen videos.
Digital Dubliners: http://digitaldubliners.com/
James Joyce: http://joyceways.com/

8. Engagement, Effort: B. Guest Speaker Quotes
(Rey Junco, February 25, 2013)

8. Engagement, Effort: C. Interactive Map Timelines
(adults with college degrees by county, May 7, 2012)
http://todayscampus.com/article/Keith_Hampson_Interviews_Josh_Keller_on__Interactive_Graphics_for_Higher_Education

8. Engagement, Effort: D. Google Map Gallery
September 16, 2014
http://maps.google.com/gallery/

8. Engagement, Effort: E. Map Trend Interpretations
e.g., Global Forest Watch (April 2014)
http://www.globalforestwatch.org/map?/3/-3.72/27.00/411/propacal/loss/946
8. Engagement, Effort:
F. Data Visualization Tools (Harvard and MIT MOOCs) Lawrence Biemiller, February 20, 2014, Chronicle of Higher Education

March 15, 2015
9. Tension, Challenge, etc.:
B. Controversial Issue Debates
SXSW: Tackling the growing gender gap in technology
Mike Snider, USA Today

July 10, 2014
9. Tension, Challenge, etc.:
C. Controversial Issue Debates
Scholarly journal retracts 60 articles, smashes ‘peer review ring’, Fred Barbash, Washington Post

10. Yields Products, Goals:
A. Goal Setting Tools
(e.g., I Done This, Milestone Planner, and 43 Things)
10. Yields Products, Goals: C. Student Created Videos

Poll #4:
Which of these ideas might you use?

A. Guest speaker quotes
B. Data visualization tools
C. Challenge debates (cage matches?)
D. Student designed video productions
E. Student designed e-books
F. Goal setting tools
G. Gallery of exemplary work

Commitments:
Stop and Share:
Which principle(s) of TEC-VARIETY will you use?

- Tone/Climate
- Encouragement, Feedback
- Curiosity
- Variety
- Autonomy
- Relevance
- Interactive
- Engagement
- Tension
- Yields Products

Poll #5:
Any light bulbs going off in your head...?

A. Yes definitely***
B. Yes maybe!
C. Not yet (but hopefully soon...)

Where Are You R2D2?:
Addressing Diverse Learner Needs with the Read, Reflect, Display, and Do Model

Curtis J. Bonk, Professor, Indiana University
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This Generation of Students
Learning is Resource Rich
March 22, 2015
Madagascar marvel:
Divers find fossils of extinct giant lemurs
Daisy Carrington, for CNN, March 22, 2015

What about the Instructor in the Open World?

From Instructor as Credit Manager

To Instructor as Curator and Concierge

Question: How can technology address diverse learner needs?

Addressing Learning Styles
Framework #1: The R2D2 Model

The R2D2 Method

1. Read (Auditory and Verbal Learners)
   - Auditory and verbal learners prefer words, spoken or written explanations.

   1a. Collect and Listen to Interactive Stories
       (e.g., Meograph: http://www.meograph.com/)

2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)
January 28, 2015
Read 1b. Twitter Fed Class Discussions
Live-Tweeting Assignments: To Use or Not to Use?
The Chronicle of Higher Education, Adeline Koh
http://chronicle.com/blogs/profhacker/live-tweeting-assignments-to-use-or-not-to-use/58949

Read 1c. Grammar Checkers
(e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)
http://www.grammarly.com/

2. Reflective and Observational Learners
• Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives

Reflect 2a. Big Issue Reflections
(Big Questions Online (BQO)), Feb 3, 2015 (e.g., Is curiosity essential for human flourishing?)
https://www.bigquestionsonline.com/content/do-we-have-souls

Reflect 2b. Interpreting Infographics
July 24, 2014
Woman in Computer Science
http://graduatedegrees.online.njit.edu/mscs-resources/mscs-infographics/women-in-computer-science/

Reflect 2c. Workplace Internship, Practicum, and Field Experiences
Reflect 2d.
Reflect on Virtual Timelines
(Dipity, xtimeline, Simile, etc.)

Reflect 2e. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State Univ, Come and See Africa Blog; http://comeandseeafrica.blogspot.com/)

3. Visual Learners
• Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.

Display 3a. Virtualize Words Used (e.g., Wordle, Taggedo, Tagul, Wordsift, Word It Out)
http://shellyterrell.com/2010/02/14/12-word-cloud-resources-tips-tools/

Display 3b. (April 28, 2015)
Concept Mapping and Timeline Tools
(Bubbl.us, Cmap, Gliffy, Spicynodes, or Mindomo)
http://www.spicynodes.org/index.html

Display 3c. Videos for clinical education
(Sungkyunkwan University School of Medicine, www.mededu.or.kr)
4. Tactile/Kinesthetic Learners

- Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulative, and hands-on projects.

February 8, 2015
Do 4a. Recap Discussion (e.g., Prezi from Thuy Han for R678 class Week 4)

Poll: How many ideas did you get from this talk?
1. 0 if I am lucky.
2. Just 1.
3. 2, yes, 2...just 2!
4. Do I hear 3? 3!!!!
5. 4-5.
6. 5-10.

Do 4b. Student Music Recordings of Course Content
April 26, 2015

IST Groove Song, Jeffrey Jenkins, R511: https://soundcloud.com/jeffjenkins25/ist-groove
The World is Open, Jill Kaufman, R678: https://www.youtube.com/watch?v=ZRGV0Mg5Vmw&feature=youtu.be
Daniel Halluska, P540: http://www.youtube.com/watch?v=tOL7lrGsqnw

Where are we headed?
Where is Education 3.0?
Poll #6: Which do you prefer... (A) TEC-VARIETY or (B) R2D2?

Any Questions or Comments?
Try TEC-VARIETY...Try R2D2
Slides at: TrainingShare.com
Papers: PublicationShare.com
Free Book: http://tec-variety.com/
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