A Model Project for Introducing Open Educational Resources to High School Students

(within a specific context: Youth for Change Project)

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Abstract:

Tremendous changes have occurred with the advent of the Internet and accessibility to information technology. A rapidly developing aspect of these changes has taken place in the realm of education, in particular, the Open Educational Resource Initiatives and Open CourseWare. Briefly defined, "Open Educational Resources and OpenCourseWare are part of the trend to make software, educational materials, and entire courses, freely available and accessible via the Internet, primarily to under-resourced nations or individuals, but also to any individual who wants free access to information." (Singh, 2008) This would be in direct contrast to proprietary management of this educational information by means of password accessibility, copyrights and/or status as a member of an institution of higher learning.

Even with the inherent problems, inconsistencies and legal aspects that are still to be "ironed out" this Open Movement is an exciting venture and speaks to a higher philosophical point of view.

"My life is teaching. To have a chance to do that with a world audience is just amazing."

(Gilbert Strang - MIT Mathematics professor 2009)

But how, exactly, do we present these new opportunities to the public or, in the context of this paper, to high school students? How many are even aware of this Open Movement? I hope to give a hypothetical answer to these questions by proposing an experimental model for introducing OER and OpenCourseWare to a public high school group of students. Rather than just a general introduction it will take the theme of social issues. The students will be able to use OER and OpenCourseWare while also researching social issues. It is my intention that in the process of making these students aware of the different facets of these resources it may prove helpful in other areas of their lives - their present studies, preparation for what's to come when they enter college and an opportunity to experience self-reliance while participating in an independent project.

Youth for Change Project

Anyone who has had the opportunity to read YA literature would recognize what a dominant role social issues play in its fiction genre. But beyond just fiction these issues are obviously of global importance and the youth of today cannot afford not to be knowledgeable of them. Granted, it's not always the easiest task to engage young people in social issues, community service and global thinking as their lives have become as stressed and fast-paced as many adults. However, there seems to be a "gearing down" in this global pace as more and more individuals are becoming acutely aware of the price of this stressful, impersonal pace. The youth will soon be the keepers of this planet. Here's a chance for them to slow down and check out what's happening - and get involved.

The project has several parts:

1   Integration of OER with Social Networking Tools

Purpose - to use what is popular and familiar to teens in order to engage them in this project and, at the same time, give them exposure to the OER sites. I should think it will be very obvious to them that OER and social networking tools are very compatible.

2   Meeting the Guidelines of a High School Curriculum in Regards to Social and Academic Skills:

Purpose - for each student to acquire these social and academic skills as preparation for life:

- Gaining a sense of community
- Gaining the knowledge to access and evaluate information
- Developing leadership responsibility
- Developing a greater understanding of world issues
- Using research skills in a variety of media
- Exploring college opportunities
- Showing respect and tolerance for people of different genders, ethnicity, race and value systems
- Appraising skills, interest, and goals realistically
- Using resources, both human and material in decision making
- Focusing on a career area
- Demonstrating self-reliance

(Analy High School Curriculum Guidelines 2009)

3 Exploration of what's "out there" both socially and academically:

Purpose - to increase the students awareness of his community and his world through participation in OpenCourseWare high school and/or college courses, materials, lectures, etc and to help better his/her understanding of his/her world.

Exposure to OpenCourseWare is knowledge that promotes and develops compassion and tolerance as well as intellect. As it has been said before, education may very well be the most viable path to peace.

The OER courses, more specifically, the high school courses offered through a MIT program, *Highlights for High School*, not only helps the student with his high school studies but gives the student a glimpse into what they will soon be studying in college - all through easy access and high quality courses. Since MIT's inception of the high school program in January 2006, the response to the program has been overwhelming with more than 260,000 visitors from 190 countries using the site in the first six months. The stats can be broken down into 37 percent of those being high school educators, 16 percent high school students and 13 percent parents. (MIT News, 2008)

MIT's high school site presently does not have a social networking component or online community. They believe that social networking is a valuable tool for tutoring, discussing problems and meeting students and teachers from other schools. Based on user feedback, future versions of the site may include a social networking component or online community. (MIT *Highlights for High School* 2009)

4 The Development of Self-Reliance and Entrepreneurial Skills

Purpose - to participate in an entrepreneurial project that can serve to develop leadership and self-reliance skills while introducing the student to a range of Open Movement materials and tools

It is hoped that the materials that make up the Youth for Change Project packet will be seen as suggestions and possibilities for the students to consider and the facilitator (librarian) to oversee. The focus in the packet has been on selecting tools that are, for the most part, open content, open resources or open access as well as social networking tools. The students should be the dominant voice in what is chosen or added to this list with the librarian giving the final consent.

It is also hoped that this project can become an entrepreneurial experience. There are a range of activities involved that would be similar to running a small non-profit: organizing information for purposes of creating a database of research collected; posting updates on their own RSS feed of new information, classes, book reviews or events; investigating forms of funding for supplies and possible grants; managing and delegating duties such as advertising the project or serving as one's own community service by giving short talks to students in the lower grades and introducing them to "serious games"(i.e. free socially-conscious video games online - see gamesforchange.org) that have a focus on bringing awareness to young people of social issues affecting young people all over the world. And within the "community" of their own school library they could help maintain an "Open Movement Resources Desk that would make available to all students and educators basic information about the movement as well as listings of universities/colleges offering OpenCourseWare (general courses) and Open Textbooks - free, accessible online textbooks for students and educators.

All these activities could serve as skills acquired and knowledge gained when it comes time to fill out the college applications. Along with researching Open Educational Resources, Open Access journals and/or participating in OpenCourseWare classes, students can also

write their own social issue essays (complete with peer review and final approval of the librarian) and post through an open source management system such as Moodle (moodle.com) or simply through creating a link on the library website for Youth for Change that would include a blog that was created by a student through another open source tool - wordpress.com. Or the students could choose a wiki (social networking tool - pbworks.com) for sharing and collaborating on ideas. For purposes of student safety there is the option of making either a wiki or a blog private (i.e. only the students would have access to reading and posting.)

Photos could easily and legally be downloaded from an open source site such as flickr.com/creativecommons or videos could be embedded from a site such as YouTube (social networking tool - youtube.com)

Last but not least there are good YA reads to consider. The packet includes a list of fiction books with a social issue theme as well as non-fiction books that all shed important light on the social issues of our time - issues that are specifically teen related to those that are global in nature.

Included with this list are sites to explore Open Textbooks.

5 Development of own YFC community service:

Purpose: to experience the personal satisfaction that comes with serving others

As I have already briefly mentioned the YFC students may opt to take their knowledge "to the streets" so to speak. Just as the MIT students participate in the creation of classes for high schools, the high school students can do the same by sharing their knowledge with the lower grades. Teaching reinforces one's own knowledge while imparting it to others.

School visits to the lower grades could be arranged and might consist of a brief talk on a specific (social issue) topic that is accompanied by what is becoming a powerful tool for social awareness - socially conscious video games or "serious games." If the talks were held in the school's computer lab it would be just be a matter of showing the younger students how to access the games and provide any guidance necessary and/or follow up.

A great source for these games is an organization called Games for Change:

"Games for Change seeks to harness the extraordinary power of video games to address the most pressing issues of our day, including poverty, human rights, global conflict and climate change. We are a voice for the transformative power of games, bringing together organizations and individuals from the non-profit sector, government, journalism, academia, industry and arts, to grow the sector and provide a platform for the exchange of idea and resources. Through this work, Games for Change promotes new kinds of games that engage contemporary social issues in meaningful ways to foster a more just, equitable and tolerant society. "(gamesforchange.org 2009)

"Games are growing up," says Suzanne Seggerman, co-director of Games for Change…"They're mature enough now to finally sustain real world content."(Madrid, 2006). These games are categorized into age groups for appropriate viewing.

Though Games for Change is not an open source site there are some interesting developments on the horizon. In an article by Linux and Open Source titled "AMD Moves Brings Open Source Gaming Closer" a group of determined engineers with AMD (a supporter of Games for Change) were able to assist in the release of open source Linux code for its GPU series of graphic accelerators (GPU - graphic processing unit - are very efficient at manipulating computer graphics.) Though there are some issues with a competitor that shares the market it, nevertheless, may indicate the possibility of Open Source having good GRAPHIC software in the near future. (Blankenhorn & Rooney, 2008) and the possibility that there will be open source software available to create "serious games."

6 Fund-Raising Activities:

Purpose: to help fund the YFC project and serve as an opportunity to connect with the community.

Though this may not be the type of activity most young people would be anxious to participate in, it actually has many characteristics of the Open Movement. Fund-raising is about connecting with your community and being sustained by that community. It involves sharing and collaborating. Partnering with other associations in your community is a fairly easy strategy. Groups such as the Rotary Club, Kiwanis Club and Lions Club are a few that were "formed and exist on the basis of community service and… are often looking for non-profit organizations to partner with". (Sanderbeck, 2009) If the YFC students were to give a solid, thoughtful presentation of their purpose and intention they may very well qualify for a small grant from one of these organizations. And this is yet another important skill for any young person to learn - giving an effective presentation and serving as a confident and competent representative of a group.

Another easy strategy that extends outside the local community would be to form an "affiliation" with an established business such as amazon.com. For instance, the social issue book lists can be posted on the website with an Amazon link. Whenever anyone purchases a book by following the Amazon link on the library site, an agreed upon percentage of the sale is given to the project. This affiliate program is a favorite form of fund-raising for thousands of libraries around the world - and it's free to sign up with an affiliate partner. (Sanderbeck, 2009)

It would also be well worth the time for the librarian/facilitator to look into the various courses Infopeople.org offer to individuals in the library field. There is usually a workshop available regarding some aspect of fund-raising and open source. Infopeople.org is yet another organization that operates with an open content creative commons license.

The following Resources Packet completes the Youth for Chance project model.

Suggestions and modifications are welcome - in the name of open content!

Resources Packet:

moodle.org

Moodle is an online course management system - an "adjustable" environment for learning communities, not an open forum for the public. It is an open source (and freely available) software package, licensed under the GNU public license (www.gnu.org) and capable of being installed on Windows, Mac and Linux (servers running php).

The system allows for different learning and teaching styles (easy customization for different users) as well as collaboration and communication.

A core team of developers, plus hundreds of community volunteers at Moodle Headquarters in Australia take care of Moodle (allows for continuous quality control).

wordpress.com

Wordpress is a "hosted" (must abide by user agreement - to get around technical/legal issues) version of the open source package. You can create a customized blog in seconds without any technical knowledge, download pictures from flickr.com/creativecommons or embed videos from youtube.com. The blogger can add his own tags (create your own metadata!) and the tags are automatically added to the wordpress "global tag" system. Wordpress uses excellent spam tracking technology to keep the blog safe from unwanted posts.

flickr.com/creativecommons

Flickr Creative Commons is an online photo management website through which users have chosen to offer their work under a creative commons license. You can browse or search through content under each type of license so that when you choose a photo you know what kind of "attribution" you need to give to the author.

Wikis

A wiki is a tool used for collaboration with another person or more than one person on any kind of project. Content can be a report, brainstorming ideas, planning, on any general information on a topic. A private wiki would only be viewed by members.

Check out **http://pbworks.com**

infopeople.org

"Infopeople is a statewide LSTA project that functions as the training arm of the California State Library….The Infopeople model provides a breadth of training topics and a depth of training expertise greater than any single library or library agency… could provide."

(infopeople.org 2009) Material on this website is licensed under a Creative Commons License.

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Sample workshop: Writing Library Grant Applications: Secrets for Competitive Success.

Archived workshops: Please be advised that webcasts and webinars are not updated once they are presented. The material, although still available may be outdated. (infopeople.org)

Open Source ILS Add-ons (10/22/09) Ayre

Introduction to Drupal for Libraries (8/28/09) Solomon

Open Source Library System Software: Libraries are Doing It for Themselves (7/21/09) Ayre

OpenCourseWare:

OCW can be defined as a free and open digital publication of high quality educational materials, organized as courses that are available for use and adaptation under an open license (See Licensing/Creative Commons)

The number of universities/colleges offering OpenCourseWare would be too numerous to list here but the following are excellent sites to begin with:

(Please note that specific courses related to social issues have been listed as examples of possible courses to explore for this project)

Highlights for High School is an MIT initiative providing free, open source teaching and learning materials to high school teachers and students. The site includes: Video lecture clips, lecture notes, practice problems, exams, and other resources from MIT's introductory Physics, biology and Calculus courses: mini-courses for high school students developed by MIT students, and an introduction for students to the college-level MIT curriculum and course materials on OpenCourseWare

The *Highlights for High School* portal contains links from the homepage especially for students and teachers explaining how the site might be most useful. Explore Introductory courses to see what courses will be like in college. Follow the lessons in High School courses developed by MIT Students. Study for AP exams in Biology, Calculus, and Physics.

Then check out the following courses related to Social Issues: Write Better: Moral Problems and the Good Life; Expository Writing: Social and Ethical Issues in Print, Photography and Film; American Consumer Culture.

All courses are free, requiring no registration. It is NOT a degree-granting or credit-bearing initiative. http://ocw.mit.edu/OcwWeb/hs/home/home/index.htm

MIT OpenCourseWare: http://ocw.mit.edu/OcwWeb/web/home/home/index.htm

Sample courses: Visualizing Cultures; Past and Present Climate;

Open Yale Courses: http://oyc.yale.edu/psychology

Sample courses: Psych 123: The Psychology, Biology and Politics of Food

Carnegie Mellon Open Learning Initiative:
http://oli.web.cmu.edu/openlearning/forstudents/freecourses/economics

Sample course: Economics- Supply and Demand; Minimum Wages

UC Irvine (CA): http://ocw.uci.edu/courses/?cat=10

Sample courses: Political Science 126C: U.S. Immigration Policy;

International Studies 12: Global Issues and Institutions

Penn State U: http://open.ems.psu.edu/courseware

Sample course: Energy workshop: Energy 101

Tufts University: http://ocw.tufts.edu/TuftsOER

Sample courses: Circle: civic Engagement of Youth; Producing Films for Social Change

University of Notre Dame: http://ocw.nd.edu/center-for-social-concerns

Sample courses: CSC 33976: Envirnomental Justice and Human Rights in the Aftermath of Katrina; IIPS 30101 Introduction to Peace Studies

Top 100 Open Courseware Projects: http://oedb.org/library/features/top-100-open-courseware-projects

Sample courses: #54 - Biodiversity and Conservation; #56 Environmental and Natural Resources Economics

OpenCourseWare Consortium: www.ocwconsortium.org

Sample courses: **University of Southern Queenland**: Eng2002 Technology and Society;

UK Open University: Claiming connections: A Distant World of Sweatshops (DD205_2)

Note to educators: Cite/Attribute OCW Content

If you choose to reuse or repost OpenCourseWare materials, you must give proper attribution to the original faculty author(s). Many use the Creative Commons license (BY-NC-SA)* Please check with the specific university and/or www.creativecommons.org

Terms defined:

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Share-alike (**sa**): imposes the requirement that any freedom that is granted regarding the original work must be granted on exactly the same or compatible terms in any derived work: this implies that any copyleft license (i.e. a license that removes restrictions) is automatically a "share-alike."

Books

Open Textbooks

An open textbook is an openly-licensed textbook offered online by its author(s). The open license sets open textbooks apart from traditional textbooks by allowing users to read online, download, or print the book at no cost.

Open textbooks are increasingly seen as a potential solution to some of the challenges with the traditional textbook publishing model. (Wikipedia, 2009)

Sample websites to check out:

Flat World Knowledge *www.flatworldknowledge.com/about*

Textbook Revolution: *www.textbookrevolution.org*

Wikibooks *en.wikibooks.org*

Global Text Project *globaltext.terry.uga.edu/books*

Community College Consortium for Open Educational Resources Open Textbooks Project

oerconsortium.org/discipline-specific

Printed Books

The following are good teen reads that have social issues as a theme. (Fiction/Non-Fiction)

Fiction: USA:

Anderson, L.H. (2009). *Wintergirls.* New York; Viking Juvenile

 (social issues: anorexia, self-esteem, step parent)

Bauer, J. (2005). *Peeled.* New York: Speak/Penguin. (social issues: urban sprawl vs. farmlands; media hype)

Cart, Levithan, Shanower, & Koertge. (2009).*How beautiful the ordinary: twelve stories of identity.* New York: Harper Teen. (social issues: gay, lesbian and transgender teens.)

Chaltas, T. (2009).*Because I am furniture.* New York: Penguin/Viking.

(social issues: spouse/child abuse)

Davies, J. (2009). *Lost.* Singapore: Marshall Cavendish. (social issues: loss, immigrants, unsafe working conditions)

Deuker, C. (2008). Gym Candy. Orlando, FL: Houghton Muffin.

(social issues: steroid use in sports)

Griffin, P. (2009).*The orange houses* . New York: Dial (social issues: poverty, gang violence, physically challenged, drugs, immigration)

Hoban, J. (2009). *Willow*.New York; Speak/Penguin. (social issues: despair, depression, self-mutilation)

Katcher, B. (2009). *Almost Perfect.* New York: Delacorete *for Young Readers.(s*ocial issue: sexuality)

Novgorodoff, Ponsoldt & Percy. (2009). *Refresh, Refresh*. New Yorka; First Second

(social issues: war; absent parent)

Spears, R. (2005). *Teenagers from Mars*. New York: Gigantic Graphic Novels.. (social issue: censorship)

Strasser, T. (2004). *Can't Get There From Here.* New York: simon & Schuster.

(social issue: homeless teens)

Taylor, M. (2004). *What's Happily Ever After, Anyway?* Weston, CT: Brown Barn Books.

 (social issues: sex, pregnancy, abortion)

Volponi, P. (2009). *Hurricane Song.* New York: Speak/Penguin.

(social issues: poverty, violence, social inequality)

Fiction: International

Burg, A.E. (2009). *All the Broken Pieces*. New York: Scholastic. (social issues: war, adoption, social exclusion) Vietnam/USA

Engle, M. (2009).*Tropical Secrets: Holocaust Refugees in Cuba* . New York: Henry Holt.

 (social issues: ethnic and religious bias) Europe/Cuba

Hamilton, H. (2009).*Ribbons of the Sun*. Weston, CT: Brown Barn Books.

(social issues: child exploitation, abuse, pregnancy) Mexico

Laird, E. (2004). *Kiss the Dust*. New York: Puffin Books..

(social issues: freedom, social injustice) Iraq/Kurds

Min, A. (2002). *Wild Ginger*. New York: Manner Books.(social issues: abuse, oppression) China

Staples, S. A. (2008), *Under the Persimmon Tree* New York: Square Fish.

(social issues: war, oppression of women) Afghanistan

Non-Fiction

Akbar, S.H. & Burton, S. (2005). *Come Back to Afghanistan: A Californian Teenager's Story* - Bethel Park, PA: Bloomsbury (social issues: crime, violence, poverty)

Kilbourne, J. 2000). *Can't Buy My Love*: *How Advertising Changes the Way We Think and Feel*. New York: Free Press. (social issue: media hype)

Kristof, N.D. & Dunn, S.W, (2009). *Half the Sky: Turning Oppression into Opportunity for Women.* New York: Knopf. (social issues: poverty, rape, slavery, oppression)

Males, M. (2002). *Framing Youth: Ten Myths about the Nest Generation*. Monroe, ME: Common Courage. (social issues: alcoholism, pregnancy, school shootings, drugs, suicide)

Mortensen, G. & Relin, D.O. *Three Cups of Tea: Stones into Schools.* New York: Penguin. (social issues: literacy and peace)

National Geographic. (2009). *Denied, Detained, Deported: Stories from the Dark Side of American Immigration.* Des Moines, IA: National Geographic

 (social issues: ignorance, social injustice)

Sacco, J. (2002). *Palestine.* Seattle: Fantagraphics Books.

(social issues: war, poverty, social inequality)

Schlosser, E. (2001). *Fast Food Nation.* New York: Harper Perennial. (social issues: unsafe working conditions, pollution, obesity)

Movies

(The following movies were retrieved November 1, 2009 from:

http://allmovie.com

Guggenheim, D. (Director). (2006). *An Inconvenient Truth* (Motion Picture). United States: Paramont. Social issues: unethical practices, pollution, global warming

Lee, A. (Director). (2005). *Brokeback Mountain* (Motion Picture). United States: Entertainment. Social issue: same sex relationships

Attenborough, R. (Director). (1987). *Cry Freedom* (Motion Picture). United States: Universal. Social issues: civil right, human rights, apartheid, police brutality

Reitman, J. & Drake, J. (Directors). (2007). *Juno* (Motion Picture). United States: Fox.

 Social issues: violence, racial injustice, physical abuse

VanSant, G. (Director). (2008). *Milk* (Motion Picture). United States: Focus Features.

Social Issues: gay/lesbian rights, violence

Cassevetes, N. (Director).(2009). *My Sister's Keeper* (Motion Picture). United States: New Line Cinema. Social issues: genetic planning; medical ethics, human rights

Bythewood, G. P. (Director). (2008). *The Secret Life of Bees* (Motion Picture). United States: Fox. Social issues: violence, racial injustice, physical abuse

Boyle, D. (Director). (2008). *Slumdog Millionaire* (Motion Picture). United States: Warner.

Social issues: poverty, orphans, prostitution

Mulligan, R. (Director). (1962).*To Kill A Mockingbird* (Motion Picture). United States: Universal. Social issues: social injustice, racial inequality, single parent

Stanton, A.(Director). (2006). *Wall-e* (Motion Picture). United States: Buena Vista.

Social issues: pollution, unethical practices

Videos (Social Issues)

Available through many universities listed under Open Courseware (including UC Berkeley)

YouTube

Censorship on the Internet (Jimmy Wales - censorship)

YouTube vs. Free Speech (free speech)

High Price of Textbooks (open-free online-textbook movement)

Lost on a Dead End Street (Linc4Youth video project-dead end jobs given to young immigrants)

Teen Pregnancy in America (3 teen couples)

Youthnoise.com (interviews Teens for Safe Cosmetics)

The Most Terrifying Video You'll Ever See (global warming)

Every 15 Minutes (DUI)

Slow Food (the case against fast food)

A Tale of Two Schools (educational/social iniquities)

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http://www.analyhighschool.org

Blankenforn, D. & Rooney, P. (2008). *AMD move brings open source gaming closer*. Linus and Open Source. Message posted to http://blogs.zdnet.com/opensource/?p=3242

Hauser, J. (2009). *The web and parents*. Santa Barbara, CA: Libraries Unlimited. 1(19), 3(48).

Madrid, A. (2006). *Gaming for the poor*. Retrieved September 13, 2009 from

http://newsweek.com/id/46625.

MIT Highlights for high school. (2009). Retrieved October 31, 2009 from

http://ocw.mit.edu/high school/

MIT News. (2009). Retrieved October 31, 2009 from

http://web.mit.edu/newsoffice2008/mathscience-0611.

Sanderbeck, A. (2009, January). *This is how you do it: successful fundraising for and in your library*. Retrieved January, 2009 from http://www.infopeople.org/workshop/

Singh, Nan (2008). *The librarian as essential key to connecting open educational resources and information literacy in the academic world*. Retrieved October 18, 2009 from

http://eprints.rclis.org/15116/1/librarians_as_essential_key_doc.html

Wikipedia. (2009). Retrieved October 25, 2009 from

http://en.wikipedia.org/wiki/share alike