

Case Study: Science, Medicine, Mathematics, and Technology forums

Background

The mission of the National Digital Stewardship Alliance is to establish, maintain, and advance the capacity to preserve our nation's digital resources for the benefit of present and future generations. The NDSA's Content Working Group is focusing on investigating guidelines for the selection of significant content, discovery of at-risk digital content or collections, and engaging all stakeholders in the process of acquiring, preserving, and providing access to the content. Working group members are developing case studies and/or models to share broadly with all stakeholders, from content producers to cultural heritage organizations. The goal of this case study is to engage all members of the community in the preservation of content and to encourage the cultivation of relationships that could enable preservation. This case study addresses at-risk Science, Medicine, Mathematics, and Technology forum content.

About Science, Medicine, Mathematics, and Technology forums

Discussion forums have become a popular mode for scientists, mathematicians, engineers, doctors and technologists to talk to each other. Places like Stack Overflow, Math Overflow, and Science Forums have extensive amounts of these discussions. Science also comes up a lot in non-professional discussion forums, for example, forums for videogames that broach science topics, or a range of forums that exist around science controversy in the general public (evolution, anti-vax, etc). Lastly, many Citizen science projects, like Galaxy Zoo, have web forums that serve as a corollary component to the project where users discuss potential discoveries.

Historical Value

- The Public Record of Knowledge, Discovery and Innovation: Forums where professionals discuss topics record discussion between professionals. In the future these kinds of discussion forums will be invaluable records of interactions and communications between experts.
- Science Communication: As a novel form of communication these forums represent part of a change in science communication. As such, having a record of the different forums in different contexts is valuable to record the history of science communication.
- Public Understanding of Science: Many forums that bring together popular audiences offer a rare opportunity to collect and preserve discussions of science and science topics

that can allow insight into public understanding and perspective on a range of science topics.

Example sites:

- Stack Overflow: Massive online discussion forums for troubleshooting software programming issues
- Math Overflow: Focused discussion space for mathematicians to help each other work through problems.
- Science Forums: Broad and ranging discussion of science topics in more than 680,000 posts.
- Forums devoted to science controversies: For example <http://www.evcforum.net/Forums.php> and <http://www.antievolution.org/cgi-bin/ikonboard/ikonboard.cgi> or for that matter parts of other forums, this anti-vax section on a mothering forum <http://www.mothering.com/community/f/443/im-not-vaccinating>
- Sporum: A discussion forum devoted to the video game Spore. As much of the game is about science topics much of the forums also involve discussion of science topics.
- Galaxy Zoo Forums: Web forums for a popular citizen science project.

Recognized Opportunities

- Interest in born digital science content preservation among content creators evident in establishing sessions on preserving science blogs at Science Online
- Potential to incorporate this into the NDIIPP report on the Preserving Online Science meeting

Target Audiences

These audiences share multiple levels of local, state, national, and international interest:

- State-wide communities: Academic researchers; historians of science; university students and professors; archives
- National and International communities: Trending researchers; historians of science

Educating Stakeholders

The NDSA seeks to communicate the role that online science discussion forums can in community history to stakeholders through multiple venues:

- Content creators: Participate in events with content creators like Science Online
- Funders: The National Endowment for the Humanities has funded work on preservation and access of science collections, the Alfred P. Sloan foundation has funded some work on the history of science, and the National Science Foundation funds a limited amount of work on the history of science

- Historians of Science: There is not yet the kind of focus on born digital history of science that one sees in some other historical topics like literature. There is a need to reach out to organizations like the History of Science Society, and the Chemical Heritage Foundation
- State libraries and historical societies: Educate and partner with state libraries and historical societies on preserving science content related to geographic regions. (NDSA members or regional centers collect; workshop presentations at district library association meetings; conference calls with public library directors)
- National Libraries: Get national libraries to launch collections focused on these topics

Obstacles and Risk Factors

Possible risk factors and obstacles in Science, Medicine, Mathematics, and Technology forum content:

- Identification and selection of content remains challenging
- Discussion forums are a rather ephemeral kind of content, so there is substantive potential for risk of loss

Actionable Items

- Encourage a partner, or multiple partners, to propose and begin to collect a collection of science, technology, mathematics and medicine discussion forums collection. Or, to get several partners to break the topic up into content areas to collect.
- Example small web archiving projects could include
- Professional Programming Discussion Forums Collection: A collection of discussion forums where programmers discuss technical solutions
- Mathematics Discussions Online Collection: A collection of discussion forums in which professional mathematicians discuss issues and trouble shoot problems. Could also include discussion of particular mathematical software, like Mathematica
- Science controversies Forums Collection: A collection of various discussion sites focused on topics like evolution and vaccines
- Popular Science Discussion on the Web Collection: There are a range of discussion forums that are simply topically identified as general science forums. This would focus on collecting those
- Science in Pop Culture Forums: This would focus on targeting discussion forums associated with pop-cultural phenomena that generate considerable discussion of science topics. For example, tv-show forums for science fiction shows, video game forums for games like Spore that focus on science topics
- Reactions in Wisconsin to Stem Cell Research: Localized special collection focused on a particular topic in a regional area

For more information, to provide feedback, or to get involved, contact ndsa@loc.gov (please include the subject line: Content Case Studies).