Best Practices for Undergraduate Research
bepress Webinar Series
April 16, 2015

Suzi Cole
Sciences Librarian
Scholarly Resources and Services

Marty Kelly
Assistant Director for Digital Collections
Digital & Special Collections
Outline

- About Colby
- Birth of Digital Commons
- Examples of collections
Colby College
Waterville, ME

- Liberal arts, 1820 undergrads
- Founded 1813
- Emphasis on faculty / faculty student research
- Community engagement
2008 +
Honors Theses

- Retrospective scanning
- Paperless permission form
- Electronic signature (student and mentor)
- Moodle site > research process and submission
Value: honors theses

“My group is interested in the resuscitation and rescue of patients after inhalation of toxic deadly gases, including chlorine, mustard gas, and methyl isocyanate (Bhopal agent). The Bhopal agent was one of the chemicals being investigated by [your student]. If the material is public record, we would love to obtain a copy of the thesis, whether electronically or by hard copy. We will also be contacting [the faculty advisor] to determine if he is still interested in this area of research.”

“[This] work was also published in Mol. Cell. Biochem. in 2012.”
Criteria:

- Unique, born digital, student research
- Information relevant to region and state

Why?

- Outlet for student scholarship
- Not rare, but unique
- Multiple formats
Examples:

- Annual “publications”
- Undergraduate Research Symposium > CLAS (Colby Liberal Arts Symposium)
- Data
Environmental Studies Program

SENIOR CAPSTONE IN ENVIRONMENTAL SCIENCE

Environmental Studies 494: Problems in Environmental Science (2011- )

Since 1989, the senior research course in environmental science has produced annual ecological assessments of selected lakes in Central Maine. This capstone course, originally Biology 493, has been designated Environmental Studies 494 since 2011. Beginning in 2004, reports have carried the designation Colby Environmental Assessment Team.

Paper copies of earlier reports are available in Colby College Special Collections and in the Colby College Libraries' circulating collection.

BROWSE THE Senior Capstone in Environmental Science COLLECTIONS:

Belgrade Area Streams

CEAT Watershed Study: China Lake
CEAT Watershed Study: East and North Ponds
CEAT Watershed Study: Great Pond
CEAT Watershed Study: Long Pond, North
CEAT Watershed Study: Long Pond, South
CEAT Watershed Study: Pattee Pond
CEAT Watershed Study: Salmon Lake and McGrath Pond
CEAT Watershed Study: Threemile Pond
CEAT Watershed Study: Togue Pond
THE MISSING LINK:
The Ecology of the Serpentine and the Implications for East and North Ponds

THE IMPORTANCE OF HEADWATER STREAMS IN PRESERVING WATER QUALITY:
A Case Study of the Kennebec Highlands and Long Pond

Colby College
Problems in Environmental Science
Waterville, Maine 04901
2012

Colby College
Problems in Environmental Science
Waterville, Maine 04901
FALL 2013

★ Annual research project
★ Multiple file formats
★ Regional / state interest
★ Student resume enhancement

PDF  Sources of Drinking Water and Agricultural Chemical Use in Maine
      Jordan Schoonover ('10)
PDF  State Senate Environmental Performance 2007-2009
      Gordon Padelford ('11)
PDF  Rabies in Maine: 1998-2008
      Kaggie Orrick ('10)
PDF  Cell Phone Tower Location and Size in Maine
      Andy Mcevoy ('09)
PDF  Hurricane Surge Inundation and Critical Resources in Maine
      Brian Lynch ('09)
PDF  Medically Underserved Areas and Populations in Maine 2008
      Hannah Laffeur ('11)
PDF  Fire Incidences, Water Bodies, and Population in Maine
      Jenny Helm ('11)
PDF  Atlantic Salmon Habitat and Dams in Maine
      Francis Gassert ('11)
PDF  Distribution of Endangered Turtle Species in Maine
      Meghan Cornwall ('11)
Maine Lighthouses & Shipwrecks

Maine Wetlands & Conservation Areas

Medically underserved areas & populations, 2008

Farm size & lymphoma cancer
Lessons learned:

- Use a stable and secure server
- Eliminate intermediate platforms if possible
- Explore lab or classroom instruction
“Digital Commons is a powerful motivator for student scholarship. Students work harder and take projects more seriously when they know material will be viewed by others. They are also inspired by metrics identifying how many views past student projects have received.”

- Philip Nyhus, Associate Professor of Environmental Studies
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Journal of Environmental and Resource Economics at Colby

This new journal does much to enhance the research and learning experience for students involved in it. Research is more rewarding if the audience of readers for the work is larger than the single professor who usually reads student papers. A student who expects her research to appear in an open-access journal has the promise (and threat) of a wide range of readers that provides extra motivation for excellence in the research process.

Of course, many professional journals exist. However, student publication in typical professionally-reviewed journals can be stymied by demands for methodological perfection that may not be reasonable for an undergraduate with limited time for the project. JEREU can offer peer-reviewed publication with standards that

Invited Introduction

Amy W. Ando
University of Illinois at Urbana-Champaign, amyando@illinois.edu
Journal of Environmental and Resource Economics at Colby

Volume 01
Issue 01 Spring 2014

“The journal originated from efforts to help students understand and appreciate the research and publication process behind the journal articles they regularly read in classes.”

Introduction by the Editor-in-Chief

Sahan T. M. Dissanayake
Colby College, sdissan2@gmail.com

Photo from Sahan T.M. Dissanayake website: http://sahan.org/
“I shared referee reports that I received, rejections that I got from journals and some referee reports that I wrote so that the students can understand that the articles they read are the end product of a long (and sometimes frustrating) process.” – Prof. Sahan Dissanayake
“We couldn't have done this without the site (I still can't believe some students wrote 5-7 page reviews of each others work and a big part of this was that they felt they were part of something bigger than just writing a paper for a class).” --Prof. Sahan Dissanayake

- Turnkey platform
- Peer review tools
- Stability
- Search engine optimization
- Custom design options
- Excellent support!
Research experience for undergraduates

There will be an AERE-sponsored session on this topic at the Southern Economic Association meetings in November. Here is an example of, what I consider, best practices from Colby College. From the introduction to volume 1 of the Environmental and Resource Economics at Colby by the editor, Sahan T.

“Here is an example of, what I consider, best practices from Colby College.”
Inklings Magazine

- Student edited literary journal
- Student creative writing from semester long peer-led workshops
- Editors responsible for Digital Commons admin
- Library student worker as support liaison to editorial staff
Maine’s Musical Soundscapes: Franco American Musicians

- Student-produced video profiles based on interviews and research
- Digital Commons submission as course assignment
- Interviewee permissions, video archiving, metadata entry as information literacy opportunity
CLAS: Colby Liberal Arts Symposium

- Day-long celebration of undergraduate research
- Live event support as well as archive
- Digital Commons site as primary online schedule
- Social media integration
Tips, Tricks, Lessons Learned...

Engaging Faculty
• Open to serendipity
• Model collections
• Always listening...

Engaging Students
• Course integration
• Student ambassadors
• Upload form as teaching moment
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