

Evaluation Summary:

Exploring the Poles

Journal-Based Feedback

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Ryan Kelsey

Senior Education Technologist

Columbia Center for New Media Teaching and Learning

Full Design Research Report

Laura Zadoff

Graduate Student

Teachers College, Columbia University

Supervised by:

Peter Sommer, Director of Education for Projects and Services

Columbia Center for New Media Teaching and Learning

Summary: http://ccnmtl.columbia.edu/projects/evaluations/poles_summary.pdf

Project Description: Background & Purpose

Exploring the Poles is a Barnard College First-Year Seminar. "First-Year Seminars focus on critical reading, writing, and speaking skills in the context of intellectual exploration and social bonding in a shared first-year experience." They comprise introductory courses taught by faculty from different disciplines. *Exploring the Poles* is classified according to the interdisciplinary category of *Cross-Cultural Encounters*.

Exploring the Poles enables students to experience the Arctic and Antarctic environments from the perspective of early polar explorations through reading classic works and journal accounts of pioneer scientific explorers. These readings allow students to examine the effects of extreme environmental conditions on the planning and implementation as well as on the human aspects on of the expeditions.

The goals of this introductory course to writing and science are:

- Critical reading, writing and discussion
- Introduce non-scientists to the value of environmental science through polar literature
- Discuss issues related to venturing into the unknown that are of relevance to any discipline: self-reliance, leadership, preparation, decisions under uncertainty
- Show students the human face of science
- Change attitudes about science and scientists
- Use data to engage students in exploring/understanding the environment and help them learn to draw conclusions from data
- Integrate research and education

For this first iteration of the course, the curriculum was divided into three sections based on three major polar explorations (Nansen and the North Pole, Scott and Amundsen's push for the South Pole, and Shackleton in the Weddell Sea). These explorations served as three contextual units for exploring the different issues involved in polar expeditions. Each unit entailed readings, essays, group activities, and journals that corresponded to its particular topics and themes. While these topics recurred and allowed for building upon one another, the variety of situations and challenges provided a fresh approach and an unexplored context in which to expose students to increasingly complex dimensions. Each of the three units was structured around a core reading and was enriched by other texts and materials.

The course was grounded in two content areas, which were intended to work in tandem with the goals of the first-year seminars. First, the course explored scientific knowledge through an introduction to the polar environments and the challenge of their study from an environmental science perspective. Students are thus introduced to the intellectual challenge of environmental sciences. In other words, at this early stage of their academic careers, students begin to define their future interests according to their perception of existing possibilities. Therefore, the course aims to include science within their scope of possibilities. Second, the course examined the social and human dimensions of scientific expeditions, namely, the role of luck vs. skill, issues of leadership, companionship, competence, and ethics, among others. Hence, students are exposed to issues they will face as they embark on their academic career and as future leaders..

Findings

All Journal writing acquired a central role throughout the course. As intended in the project design, the journal activity provided an efficient way for dated entry and delivery of frequent student writings as well as for making them available in an organized archive. This was convenient for the students and especially for professors working from two different campuses.

Students wrote a journal entry for each reading assignment. From the students' perspective, this activity provided writing opportunities as way of appropriating the readings. It also functioned as a means with which to relate their own personal experiences to the issues discussed and to share them with professors, to prepare for class discussions by working through the issues, and to practice their writing skills. From the faculty perspective, journal entries provided a way to assess students' understanding of the readings as well as to gain insight about their interests. In addition, it enabled the faculty to anticipate questions that needed to be addressed, thereby allowing faculty to plan the pace and content of the course according to the needs of the students.

Private journals were created by adapting the discussion section of CourseWorks, the course management system of Columbia University (where students could also access the syllabus, outline, discussion board, journal, and additional resources). The journals were set up by creating groups in the discussion section of the system and utilized categories as each student's personal journal.

The screenshot displays a discussion board interface. On the left is a vertical navigation menu with the following items: INTRO, SYLLABUS, LECTURES, ASSIGNMENTS, BIBLIOGRAPHY, LIBR. RESERVES, SETTINGS, DISCUSSION, CLASS E-MAIL, STUDY TOOLS, DICTIONARY, NOTEPAD, and HELP. The main area shows a list of journal categories, each with a folder icon, a title, and a post count. The categories are: SH#4 (0 replies, 1 unread), Aylana's 3rd Journal, Group Bonding (0 replies, 1 unread), Skill, Luck and Fate (0 replies, 1 unread), The Befitting Name (0 replies, 1 unread), An overwhelming sense of pride and accomplishment (0 replies, 1 unread), Becca's 3rd Journal, journal entry #1 (0 replies, 1 unread), journal #2 (0 replies, 1 unread), journal entry #3 (0 replies, 1 unread), and journal #4 (0 replies, 1 unread). Each category includes a 'Posted' date, time, and author name. An inset window titled 'Current Groups: (Placebook, Editment, Group...)' is open, showing a list of 'Current Groups' with their members.

Main window shows journal categories in discussion board; inset shows access to categories by groups.

The faculty initiated informal discussions that were based on questions and issues raised in the students' journals. The structure of the class allowed for a *fast feedback loop* that benefited both the students and the professors. This proved to be a critical element, as students needed help to grasp and tackle the dimensions of geography, environmental issues, and a host of other topics presented in the reading.

Class discussions included a variety of topics that reflected students' concerns and questions. The professors included additional topics that corresponded to the objectives of the course. Some examples of these topics were: how to distinguish between risky and outrageous decisions, Nansen's decision to leave the ship, level of confidence of the leader, team dynamics, team morale, facing failure, communication with the crew, decision making in a team, criteria for picking team mates, trust, hypothesizing the feelings of the crew members in the different situations, expectations, the motivating force of science vs. exploration, medical issues such as adaptation of the body to low temperatures and hypothermia, and the innumerable questions about geography and environmental sciences that challenged the students in their reading assignments.

Professors Pfirman and Bell illustrated the explanations with their personal experiences, by modeling the thinking process, and demonstrating different instruments to bring the experiences to life. They also brought tangible artifacts such as a polar bear pelt, wooden skis, a sextant, a GPS device, expedition food, newspaper articles, and personal photographs. Finally, other experts in the field were also invited as guest lecturers.

Moreover, the journal-based feedback played a major role in the class dynamics. In addition to the fast feedback

loop, students benefited from a private space in which to pose a variety of questions, as well as public space in which their questions were addressed. Thus, students were encouraged to pursue their inquiry in meaningful class discussions that responded to their needs and concerns.

Two quotations from students captured during the course evaluation illustrate these points:

The teachers do a great job of taking our journals and our questions and their own input of what they should be talking about and they do like an outline and then they talk about that stuff. And that has to do with the reading we just did or may be one reading back if we are a little behind. So they are usually right on the mark. So our questions are really lingering in my mind. - Student 9

Well both of the professors are really good about answering questions and also when we write in our journals and we ask questions at the end that is also very helpful - Student 7

In addition, the ability to engage in the journal in conjunction with the assigned readings rendered the journal tool useful for elucidating and constructing interpretations of unfamiliar readings. Writing an entry immediately after or while reading helped students to identify and focus on interesting issues.

The use and role of the journals evolved throughout the course as the faculty members incorporated feedback and guidelines for the students' writing. The structure of the journal also served as a space in which to address writing issues because of its informal writing format that was easy to correct and improve. This became apparent after the first half of the course as the faculty began to provide writing feedback on journal entries. The guidelines thus progressively shaped students' writing styles. The guidelines also helped students who were uncertain as to the criteria used to evaluate their writing. The journal revealed the starting point for these students and so enabled the faculty to customize the feedback for them progressively. This was especially useful for professors whose main expertise was not the teaching of writing.

This central use of journals illustrates the relevance of feedback. Furthermore, journals were utilized to a greater extent than had been originally anticipated as the feedback on writing issues focused on the journal entries. This is due to its draft-like characteristics and students' frequent attempts to incorporate the feedback. Hence, the journal format was altered to meet these needs. Due to the short, unstructured and frequent entries (and less grade-relevant), journals provided students a secure place for exploring environmental science ideas in their writing.

Finally, open journals did not prove to be beneficial for the students' writing, as evident in the last weeks of the course. The faculty are interested in testing the possibility of open journals after the class session as a means to allow students the opportunity to learn from each other's writing styles. We are considering this alternative as a hypothesis for the next iteration of the project.

Recommendations

As already described, the journals were integrated with the discussion feature in CourseWorks. However, such a combined set-up proved inefficient for the professors as well as the students. Specifically, the placement of journal entries within the discussion board created difficulties for professors because when they accessed CourseWorks, the students' journals (journal folders) appeared together in the discussion section. Since they had to read the entries in a short period of time, this configuration rendered the task confusing and overwhelming.

Therefore, considering the benefits derived from journal writing, we recommend creating a unique and independent component within CourseWorks to allow a separate space for journal writing. A separate journal feature will help to address some of the technical difficulties encountered during *Exploring the Poles* and enhance its potential. An independent feature for journal writing would thus separate and distinguish individual journal entries from the general discussion thread categories.

Hence, the proposal for a unique and separate journal section within CourseWorks to address the issues above includes the following features:

- When the Journal section is enabled, each private journal will be automatically created within a section where the student can post her entries.
(Implemented into the CourseWorks discussion board in the fall of 2003)
- The instructor will be able to set the preferences so that entries will be viewed only by instructors, by the entire class, or by a subgroup of students.
- When reading the journals, instructors will have the option to review all the entries by one specific student, or according to the most recent or unread entries for all students.
- The journal feature that we envision will be similar to the discussion board in that it will allow the students to post entries in their own private journal folder so that instructors may directly write and post threaded replies. Therefore each student will only be able to view her own journal, and instructors will be able to view other journals. Like the Discussion Board, faculty should be able to view only unread journal entries.
- In *Exploring the Poles*, the journals have three main functions: encourage students to write, receive feedback on writing, and provide information to the instructors about the questions and difficulties encountered in the readings. Instructors use this information to plan upcoming classes. Therefore, simple navigation is a key factor. Instructors should have a “show only most recent postings” option and be able to view each student’s most recent journal posting. Once the posting is accessed, a button should be allow the user to go forward not only to the next “journal” but also to the most recent posting in the following student’s journal.
- Multiple journals should be able to be viewed by the student or grouped by journal number.
- Another optional feature will open the journal to all the students after the submission deadline. Though the functionality is similar to the Discussion Board, the act of writing a journal entry is more private. Distinguishing the Journal section from the Discussion Board is important, as it puts the students in a "private space" for reflection and writing. Therefore, the Journal section will differ from the Discussion Board in that a Class Files area will not be created when the Journal feature is enabled. A separate section and nomenclature will thus help students to differentiate between the two kinds of participation they are asked to do online.