Using poster sessions in a chemical information course

Bartow Culp
Mellon Library of Chemistry
Purdue University
Introduction

In teaching a course in chemical information, the instructor is forever reconciling the opposing forces of content inclusion with class time availability. Even a full semester course is rarely more than a one-credit/one-class-per-week offering - barely enough time to teach the sources and skills necessary to fulfill minimal course objectives. Having students prepare and present a poster session is one way to maximize the use of limited class time.

In the Chemistry Department at Purdue University, a student poster project has been a popular part of the chemical information course for 4 years. In addition to the time savings mentioned above, there are other instructional advantages to this program.
Instructional objectives of the poster session:

- It maximizes the use of valuable class time
- In assembling their posters, students apply many of the information literacy skills learned during the course
- The project requires students to collaborate within groups to achieve desired outcomes
- The actual poster sessions give students the opportunity to have their work evaluated by their teachers and peers

Other advantages:

- Topics are covered that are often not otherwise included in the course
- Good publicity for the library’s information resources
Timeline

- *First week of class*: Brief explanation of poster project within general discussion of course syllabus

- *3rd-4th week*: Formation of groups; collaborative homework assignments from this point

- *6th week*: Poster topic, accompanied by a brief abstract, is due

- *10th-11th week*: Each group discusses detailed poster design and content with instructor; “story board” of poster due

- *13th week*: Poster session, held during regular class period

- *14th week*: Class feedback and grade discussion
Project Management

The ability to work effectively in a group is a measure of success in the “real” (i.e., post-college) world; similarly, the exercise of putting together a poster presentation, whether real or virtual, is a valuable one for students, since they will frequently be called upon to do so as professionals. However, the majority of students at this level have not worked together on a group project, and practically none of them have collaborated in a poster presentation. Therefore, the project needs to be managed carefully for it properly to achieve the desired learning outcomes.

*To facilitate this, the following elements must be carefully controlled by the instructor:*

I. Group formation and maintenance
II. Poster topic selection
III. Presentation guidelines
I. Group Formation and Maintenance

Critical points:

- Early formation of groups
- Early setting of overall project goal and intermediate objectives
- Group size: A group size of four works the best (for a class size not divisible by 4, groups of 5 are formed as needed)

After the groups are formed, most of the weekly homework assignments are designed to be collaborative. These assignments allow the groups to shake out prior to the more serious effort of the poster preparation. “Jumping” among groups is also allowed within the first few weeks of their creation. However, by the time the poster topic is due in the 6th week, all group memberships are frozen.
II. Poster Topic Selection

In order to maintain a coherent theme for all the groups’ posters, the instructor establishes a general theme in advance. Examples:

- “Electronic databases in chemistry”
- “Comparing print and online chemical information resources”
- “Things you didn’t know were in the Library”

(At Purdue, a particularly popular topic was to have each of the groups design Web pages that described different aspects of the library’s services. These pages became the basis for the Chemistry Library’s present Web site.)
III. Presentation Guidelines

The guidelines used for the course (and this poster) are found in:


Show Time!

The session is usually held in a well-traveled hallway outside the library. Poster boards, easels, pushpins and tape are provided for the groups, who must have their posters in place by the beginning of class time. Handbills advertising the event are distributed around the building several days ahead, and members of the faculty are urged to attend. Gratifyingly many do, joining the passing students in questioning the group members about their poster topics, and imparting legitimacy to the session. Digital pictures are taken of the session for future posting on the class Web site. After the hour-long session is over, the posters stay up for the remainder of the day.
Evaluation:

The posters are graded according to three criteria: Topic selection, project execution, and poster presentation. For the last criterion, the class is involved in the grading. During the class period in which the poster session is conducted, each group uses an evaluation form (EVAL1, see example) to judge the other groups’ posters. The purpose here is to have the students look critically at each other’s presentations. In addition, the members of each group must complete a group self-evaluation form (EVAL2, see example). This is to allow some normalization of grading in cases of unequal contributions by group members. During the class period that follows the poster session, the composite evaluation of each poster is reviewed and small prizes (usually Purdue coffee mugs) are awarded to the group with the “champion” poster based on its presentation score.
Conclusions:

The inclusion of a poster session in the structure of an information literacy class can accomplish many teaching objectives that are central to the overall goal of increasing the information competency of students. If properly managed, it can also provide students valuable experience in group dynamics and in making presentations. It can also enhance the visibility of the library by showcasing different aspects of its services in a lively yet informative fashion.
An expanded version of this poster presentation has been published as a chapter in the book:


Copies of this poster session can be obtained by contacting the author. E-mail address: bculp@purdue.edu
Spektroskopie Online

http://www.chem.uni-potsdam.de/tools/

Spectra Wizards

'H' Wizard

'IR Wizard'

'MS Wizard'

'G Database'

'Select C'

'H NMR Bank'

'MSC Stories'

'Pred. Care'

'FTE'

'Spectroscopy'

'Instruments'

'Literature'

'FTE'

'Spectroscopy'

'Instruments'

'Literature'
CHEMDEX.ORG
Solving The Online Chemistry Puzzle...